DOCUMENT RESUME

ED 320 510 HE 023 602

AUTHOR Carter, Deborah J.; Wilson, Reginald
TITLE Minorities in Higher Education. Eighth Annual Status Report.
INSTITUTION American Council on Education, Washington, DC. Office of Minority Concerns.
PUB DATE Dec 89
NOTE 56p.; For the seventh annual report, see HE 023 601.
AVAILABLE FROM Office of Minority Concerns, American Council on Education, One Dupont Circle, Washington, DC 20036 (1-10 copies $10.00 ea., discounts on larger quantities).
PUB TYPE Reports - Research/Technical (143) -- Statistical Data (110)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Persistence; American Indians; Asian Americans; Black Students; College Graduates; Data Collection; Educational Status Comparison; Enrollment; Enrollment Rate; *Ethnic Groups; Higher Education; High School Graduates; Hispanic Americans; *Minority Groups; *Sex Bias; Social Influences; Surveys; Trend Analysis

ABSTRACT

The latest available data as of the end of 1989 is presented on the progress of African Americans, Hispanics, Asian Americans, and American Indians in postsecondary education. Statistics have been compiled on high school completion, college participation, and college completion obtained from the U.S. Department of Commerce's Bureau of the Census data on high school completions and college participation, and from the U.S. Department of Education's Center for Education Statistics on earned degrees. The report also contains earned degree data for historically Black colleges and universities. The report focuses on high school completion and college participation patterns of low-income and middle-income African American and Hispanic youth; Asian Americans and American Indians could not be included because annual data on these groups is lacking. A brief summary of campus efforts to increase minority participation and degreee attainment is included. Contains 19 table of statistics and 17 references. (GLR)

Eighth Annual Status Report

Minorities in Higher Education

Deborah J. Carter and Reginald Wilson

American Council on Education
Office of Minority Concerns
Blandina C. Ramirez, Director

December 1989

Acknowledgements

The Office of Minority Concerns (OMC) of the American Council on Education is pleased to issue this *Eighth Annual Status Report on Minorities in Higher Education*. We hope the special focus on high school completion and college participation rates of low- and middle-income minority youth will be informative to policymakers and administrators who are grappling with the urgent need to increase the college-going rates of underrepresented populations. Your comments on ways to improve the report are always welcomed.

We wish to acknowledge the outstanding work of Eileen O'Brien, a principal contributor to this report, Boichi San, Data Services Coordinator at ACE, and Mark Conley, a contributing writer. Without the support of Laurent Ross, Elaine El-Khawas, Charles Andersen, Carol Baldwin, Lachone Fuquay, and Sharon Jones this report would not have been possible. Special thanks are also extended to those who served as reviewers for this report.

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Executive Summary

- From 1986 to 1988, higher percentages of white high school graduates enrolled in college while the college-going rates of African American and Hispanic high school graduates remained disproportionately low, thus widening the long-standing college participation gap between whites and African Americans and Hispanics.
- For African American males, their overall college participation rate fluctuated between 1986 and 1988 but remained dismally low compared to gains in the college-going pattern of white males.

A special analysis of 18-to-24-year-old dependent youth also found that family income and gender are major factors in high school completion and college participation. This analysis revealed the following trends between 1976 and 1988:

- Approximately 53 percent of all 18-to-24-year-olds are considered dependent primary family members, although specific percentages differ for whites, African Americans, and Hispanics. Overall, nearly 51 percent of dependent youth enrolled in college in 1988 compared to only 11 percent of their independent counterparts.
- The high school completion rate of dependent white youth was consistently higher than that of dependent African American and Hispanic youth at every income level, but differences in high school completion rates between African American and white youth corresponded more to family income than to race.
- From 1976 to 1988, high school completion rates increased for African Americans and Hispanics ages 18 to 24. But through 1988, low-income youth in these groups netted few gains while maintaining distressingly low high school completion rates.
- Low-income males in both the African American and Hispanic communities have alarmingly low rates of high school completion. According to 1988 data for dependent 18-to-24-year-olds, 43 percent of low-income Hispanic males and 53 percent of low-income African American males completed high school, compared to 60 percent of low-income Hispanic females and 69 percent of low-income African American females.
- Between 1976 and 1988, the enrolled-in-college participation rate of dependent, low-income African American high school graduates dropped from 40 percent to 30 percent. The percentage of low-income Hispanic high school graduates enrolled in college also fell, from 50 percent in 1976 to 35 percent in 1988. Conversely, low-income white high school graduates made a slight gain in college participation.
- Middle-income African Americans and Hispanic Americans also appear to have suffered severe losses in their college-going rates, with the largest declines occurring during the late 1970s and early 1980s. By 1988, the enrolled-in-college participation rate of middle-income African Americans had fallen to 36 percent, from 53 percent in 1976. Corresponding rates for Hispanics were 46 percent in 1988 and 53 percent 13 years earlier.
- At both low- and middle-income levels, African American men experienced greater declines in college participation than African American women.

- Despite losses in degree awards at nearly all levels for African American men, minorities collectively achieved some gains in the mid-1980s. From 1985 to 1987, minorities posted increases of nearly 3 percent in associate degrees, 6 percent in bachelor's degrees, 3 percent in master's, and 15 percent in first-professional awards.
- As of 1987, Hispanics, African Americans, and American Indians continued to be underrepresented among degree recipients compared to their enrollment levels in higher education. Hispanic Americans comprised 5.3 percent of the undergraduate population in 1986 but earned only 2.7 percent of all bachelor's degrees awarded in 1987; correspondingly, African Americans made up 9.2 percent of all undergraduates but received only 5.7 percent of all bachelor's degrees. Similarly, American Indians comprised 0.8 percent of the undergraduate enrollment, yet they received only 0.4 percent of all baccalaureate degrees.
- Although African American males continued to show slight declines in bachelor's and master's awards between 1985 and 1987, their rate of decline slowed in comparison to the period from 1976 to 1985. From 1985 to 1987, they also showed a 13 percent increase in first-professional degrees.
- With the exception of African American women at the master's level, women achieved significant gains in degree awards from 1976 to 1987, obscuring some losses by their male counterparts. During this period, men earned 7.1 percent fewer degrees while women made a 20 percent gain.
- Between 1985 and 1987, African Americans, Hispanics, and American Indians continued to experience large declines in education degrees at the bachelor's and master's levels. Whites and Asian Americans completed more degrees in this field, reversing a 10-year decline.
- As a group, minorities continued to make gains in the number of business degrees at both the bachelor's and master's levels from 1985 to 1987.

However, American Indians showed a 13 percent drop in bachelor's degrees and a 37 percent loss in master's degrees in this area. Similarly, African American men experienced a 4 percent decline in degrees granted in business.

- From 1978 to 1988 U.S. citizens earned fewer doctorate degrees from American colleges and universities while non-U.S. citizens received more. A 47 percent decline in doctorates awarded to African American males and a 21 percent drop for white males contributed to an 8 percent decline in the number of U.S. citizens earning doctorate degrees between 1978 and 1988. Conversely, non-U.S. citizens posted a 63 percent increase in doctorates during this same period.

Introduction

This *Eighth Annual Status Report on Minorities in Higher Education* presents the latest available data on the progress of African Americans, Hispanics, Asian Americans, and American Indians in postsecondary education. Since the release of the first status report, this annual study has become a major source of information on current trends and issues relevant to minorities in higher education. Because of declines in college-going patterns of many minority youth and stagnation in the hiring of minority faculty, most of the trends discussed in prior reports have not been positive, particularly for African Americans, Hispanics, and American Indians. It would be a welcomed and much needed relief if we could report major improvement in these trends this year. However, despite the efforts of some institutions and a number of states to expand access to higher education for underrepresented racial and ethnic groups, we can identify only small pockets of success.

As in past years, we have compiled statistics on high school completion, college participation, and college completion. We present data from the U.S. Department of Commerce's Bureau of the Census on high school completions and college participation and from the U.S. Department of Education's Center for Education Statistics on earned degrees. The report also includes earned degree data for Historically Black Colleges and Universities. Unfortunately, it was not possible to conduct an analysis of high school completion and college participation trends for Asian Americans and American Indians because data on these groups are not available annually through the Bureau of the Census. We must stress again the importance of improving national data collection systems for monitoring the college-going patterns of all groups annually.

This year's special focus is on high school completion and college participation patterns of low-income and middle-income African American and Hispanic youth. It was not possible to include Asian Americans and American Indians for the aforementioned reasons. Our analysis reveals precipitously low rates of high school completion for low-income students, particularly low-income Hispanic and African American males. The data also reveal a major decline in the college-going rates of both low- and middle-income African American males between the ages of 18 and 24, as well as significant declines for low-income Hispanics.

High School Completion and College Participation Rates

The *1988 Status Report on Minorities in Higher Education*[1] highlighted changes in the high school completion and college-going rates of African American and Hispanic youth from 1976 to 1986. The report discussed declines in the college participation rates of 18-to-24-year-old African Americans and Hispanics relative to their increasing high school completion rates during this period. To update that information, significant changes between 1986 and 1988 will be discussed here.

According to Census Bureau data, the 18-to-24-year-old U.S. population in 1988 numbered 27.6 million and was 14 percent African American, 10 percent Hispanic, and 52 percent female. (Comparable data are not available for American Indians and Asian Americans.) Slightly more than 81 percent of all 18-to-24-year-olds had completed high school, and 37.2 percent of the high school graduates were enrolled in college, netting the highest overall college participation rate in history for high school graduates.

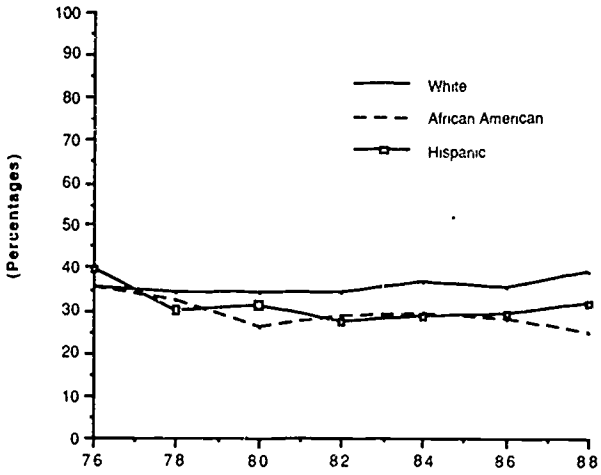
The overall high school completion rate for the 18-to-24-year-old population remained relatively stable—81.2 percent in 1988 compared to 82.1 percent in 1986 (See Table 1). The high school completion rate for African Americans stood at 75.1 percent in 1988, compared to 76.4 percent two years earlier. The Hispanic high school completion rate continued to fluctuate, dropping to 55.2 percent in 1988, compared to 59.9 percent in 1986 and 61.2 percent in 1987. Women of all groups continued to complete high school at substantially higher rates than men (see Table 2).

Table 1 shows two college participation rates for high school graduates—the enrolled-in-college rate and the ever-enrolled rate. As discussed in last year's report, the enrolled-in-college rate includes only 18-to-24-year-olds who are currently enrolled in college as of October of a given year. The ever-enrolled rate (referred to in last year's report as the attended-college participation rate) consists of high school graduates who are currently enrolled in college as well as those who have completed one or more years of college. The ever-enrolled rate is proportionately higher than the enrolled-in-college rate because it includes persons who have attended college but no longer are enrolled. As shown in Table 1, the ever-enrolled participation rate fluctuates less annually than the enrolled-in-college rate. However, both measures reflect the same general trend from 1976 to 1986--whites having increased their college attendance rates while college participation by African Americans and Hispanics has declined.

Between 1986 and 1988 this trend continued virtually unchanged. During this period the most notable trend in college participation occurred among whites—in both 1987 and 1988 they enrolled in college at higher rates than in 1986. As Table 2 shows, the enrolled-in-college rate for white men jumped from 35.7 percent in 1986 to 39.4 percent in 1988. Corresponding figures for 18-to-24-year-old white women were 32.7 percent and 36.9 percent. These increases solidified the college access gains white youth have made since the early 1980s. The same cannot be said for African American and Hispanic youth.

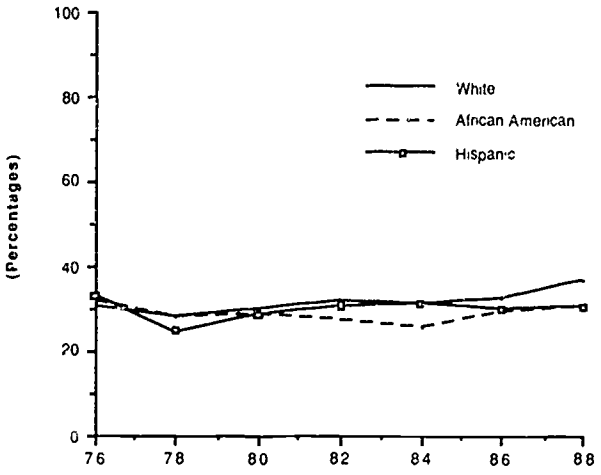
Between 1986 and 1988, the enrolled-in-college rate of African American men climbed from 27.8 percent in 1986 to 31.7 percent in 1987, then plummeted to 25

Figure 1
Enrolled-in-College Participation Rates of Male 18-to-24-Year-Old High School Graduates by Race/Ethnicity



Source: Bureau of the Census, "Current Population Reports," Series P-20, various years

Figure 2
Enrolled-in-College Participation Rates of Female 18-to-24-Year-Old High School Graduates by Race/Ethnicity



Source: Bureau of the Census, "Current Population Reports," Series P-20, various years

percent in 1988 (see Figure 1). Due to this precipitous drop in 1988, it is difficult to determine a definite trend over this two-year period for African American men. The average participation rate of African American males for the two years was almost equal to their 1986 rate. Nonetheless, since African American males experienced the largest drop in college attendance of any group between 1976 and 1986, it is absolutely critical that policymakers carefully monitor these college-going patterns and help reverse this clearly negative trend.

The enrolled-in-college rate of African American women fluctuated slightly, from 29.3 percent in 1986 to 30.5 percent in 1988. The story was similar for Hispanics. Hispanic men showed little progress, moving from an enrolled-in-college rate of 29 percent (1986) to 31.5 percent (1988). Hispanic women dropped from an enrolled-in-college rate of 29.9 percent in 1986 to 26 percent in 1987, but they recouped the loss by 1988 with a participation rate of 30.3 percent. These changes produced no gain for the two-year period (see Figure 2).

In summary, while white youth continued to experience increases in college participation between 1986 and 1988, African American and Hispanic youth made few gains. Taking into account the enrollment gains for both white males and females and the few positive changes for African Americans and Hispanics, the gap in college access between whites and minorities widened during this two-year period.

Special Focus: High School Completion and College Participation Rates of Low- and Middle-Income Youth

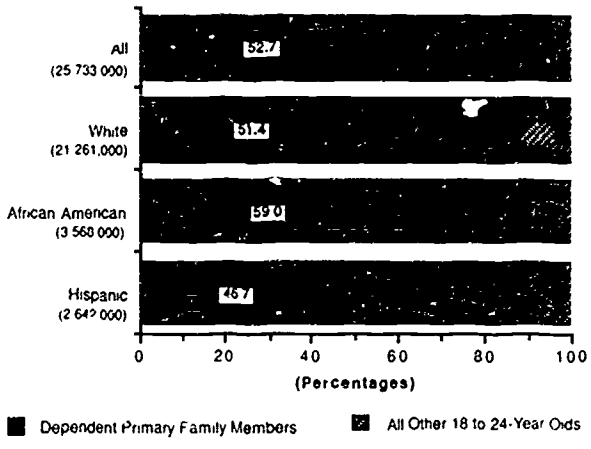
Last year's report briefly discussed the economic condition of African American males.[2] However, it included little data on the variations in college participation by income levels. From prior research, we know that students from lower socioeconomic levels are less likely to enroll in college than students from higher income families.[3,4,5] These studies and reports reveal lower college participation rates for low-income African Americans and Hispanic Americans than for low-income whites. The most current analyses of these trends end in the early 1980s. These analyses must be updated to determine if young people from different income groups have progressed, regressed, or stagnated in terms of gaining access to college during the 1980s.

This section of our report will analyze changes in the college participation patterns of dependent low- and middle-income 18-to-24-year-old African American, Hispanic, and white youth. The report will examine the Census Bureau's current population data from 1973 through 1988, and analyze changes in high school completion rates for these minority groups. Because this analysis focuses on the importance of family income relative to college participation, only 18-to-24-year-olds who are dependent family members are included. (A definition of a dependent family member is included in the technical notes.) Since this analysis excludes independent 18-to-24-year-olds (persons who maintained their own households and/or are married), the high school completion and college participation rates reported in this section will differ from those reported earlier for the entire cohort.

In 1988, dependent primary family members comprised 52.7 percent of the 18-to-24-year-old population. Figure 3 shows the percentage of dependent youngsters in the 18-to-24-year-old population by race and ethnicity, and Figure 4 depicts the same relationship for dependent high school graduates. As shown, African American families have the highest percentage of dependent 18-to-24-year-olds.

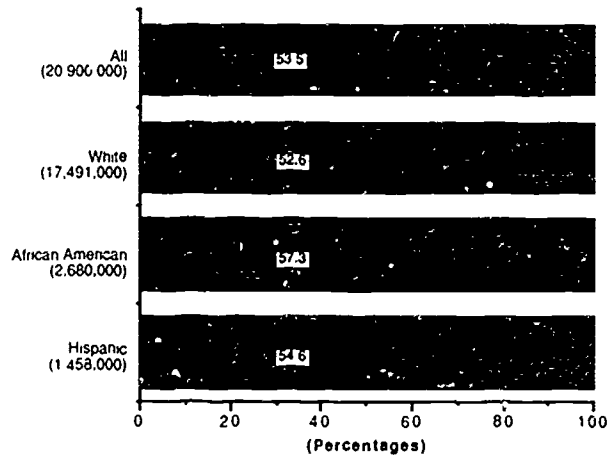
Independent 18-to-24-year-old high school graduates enrolled in college at a much lower rate than their dependent counterparts. Figure 5 compares the enrolled-in-college participation rates of dependent and independent high school graduates by race and ethnicity. In 1988, only 11.4 percent of independent 18-to-24-year-olds attended college, compared to 50.7 percent of the dependent youth in this age group. Although white independent 18-to-24-year-olds had a slightly higher enrolled-in-college participation rate (11.7 percent) than African Americans (7 percent) and Hispanics (8.9 percent), differences in college-going rates for dependent and independent youth were similar across groups. Because the college participation pattern of independent 18-to-24-year-olds is different from that of dependent 18-to-24-year-olds, further analysis of college-going patterns of independent youth is needed.

Figure 3
Dependent 18-to-24-Year-Olds as a Percentage of All 18-to-24-Year-Olds, 1988



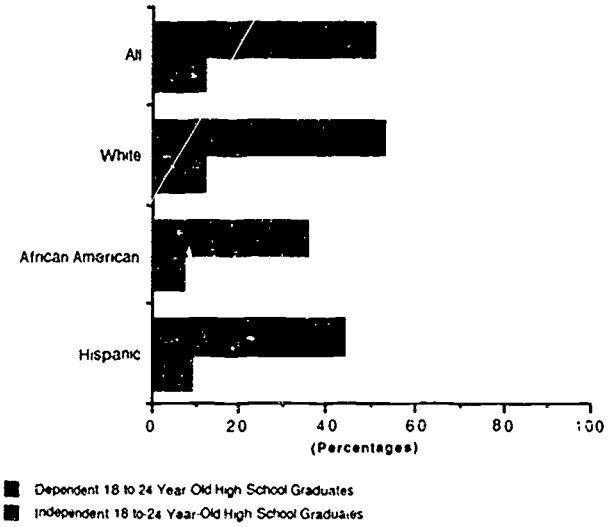
Source Bureau of the Census "Current Population Survey" October Supplement 1988
Special analysis by ACE's Division of Policy Analysis and Research

Figure 4
18-to-24-Year-Old Dependent High School Graduates as a Percentage of All 18-to-24-Year-Old High School Graduates, 1988



Source Bureau of the Census "Current Population Survey" October Supplement 1988
Special Analysis by ACE's Division of Policy Analysis and Research

Figure 5
Enrolled-in-College Participation Rates of Dependent and Independent High School Graduates by Race/Ethnicity, 1988



Source Bureau of the Census "Current Population Survey " October Supplement 1988
Special analysis by ACE s Division of Policy Analysis and Research

Tables A-2 through A-4 show the distribution of dependent whites, African Americans, and Hispanics by income quartiles. The second and third quartiles were combined to create a middle-income category. (Refer to the technical notes at the end of this report for an explanation of how yearly income quartile ranges were determined.) Table A-1 shows the current dollar ranges of each quartile for each of the seven years included. Persons from families that did not report income on the October survey were excluded.

Prior to discussing the findings, the authors would caution the reader about the limits of the data presented here. Family income data in this analysis has not been adjusted for inflation, and several tables contain high school completion and college participation rates for persons from upper-income families. However, because of possible errors caused by a small sample, no data are included for African American and Hispanic youth from upper-income families. Consequently, this analysis focuses only on low- and middle-income 18-to-24-year-olds. Also, high school completion rates are based on data that include dependent 18- and 19-year-olds still enrolled in high school. The inclusion of youngsters who have not yet completed high school lowers the overall completion rate for the total cohort. Approximately 5 percent of white 18-to-24-year-olds fall into this group, compared to 11 percent of African American 18-to-24-year-old males, 7 percent of African American females, and 9 to 10 percent of Hispanics in this age group. In addition, high school completion rates for low-income students may be lower because these students are more likely to complete high school at a slower rate than their middle- or upper-income counterparts.

The report also presents data from 1973 in the tables, but most of the discussion highlights differences in high school completion and college-going rates since 1976. This year was chosen as the focus because 1976 represented the "peak year" for African American and Hispanic college participation. Because African American and Hispanic college participation rates were lower in 1973 than in 1976, the full decline in the college-going rates of these two groups would not be shown if data from 1973 were compared to current data.

It is beyond the scope of this year's report to describe in detail factors that have contributed to these trends. However, changes in aspirations to attend college, military participation, tests and admissions standards, and student financial aid are discussed briefly.

Income Differences and High School Completion

As shown in Table A-2, nearly twice as many African American and Hispanic youth come from low-income families compared to white youth. For low-income students, high drop-out rates are well documented. At every income level, whites completed high school at higher rates than their African American and Hispanic counterparts. However, differences in high school completion rates were greater between low-income and middle-income youth than between racial groups. For example, the high school completion rate for low-income white 18-to-24-year-olds was 64.6 percent, compared to 61.3 percent for low-income African Americans and 50.6 percent for low-income Hispanics (1988). This compares to 86.4 percent for whites from middle-income families, 83.5 percent for middle-income African American youth, and 75.5 percent for Hispanic Americans in this income range. These data show that youngsters from similar family income backgrounds are more likely to complete high school at similar rates than youth of the same race at different income levels. As one would expect, the gaps in completion rates between low-income and upper-income youth were even greater than differences between low-income and middle-income students (see Table A-5).

At every income level, and for all groups, females completed high school at higher rates than their male counterparts. Gender differences in high school completion rates were greater for low-income African Americans and Hispanics than for middle-income youth from these groups. The disparity in male and female high school completion rates for low-income students is alarming. In 1988, only 53.1 percent of low-income African American 18-to-24-year-old males had completed high school, compared to 69.1 percent of African American females. Low-income Hispanic males had the poorest completion rate of all groups—43.2 percent, low-income Hispanic females had a higher, yet equally dismal, completion rate of 59.7 percent. Although the completion rates for low-

income white men and women differ substantially—61.2 percent compared to 68.9 percent—this gender difference was not as large as that of minority men and women.

As stated earlier, since the 1970s the overall high school completion rate for 18-to-24-year-olds has risen moderately for African Americans a slightly for Hispanics. However, low-income dependent students in these groups made few gains. High school completion rates for low-income African American and Latino youth fluctuated during this period, netting only a slight gain by 1988 (see Table A-5). Low-income Hispanic males maintained the lowest high school completion rate of all groups, followed closely by low-income African American males; Hispanic females ranked third from the bottom (see Table A-5).

The gains in high school completion rates for African Americans can be attributed to the improved completion rates of middle- and upper-income youngsters and perhaps independent youth who maintain their own households. Between 1976 and 1988, as a group, middle-income African American 18-to-24-year-olds showed a five percentage point gain in their high school completion rate, compared to a six point increase for upper-income African American youth. Based on available data, it is difficult to gauge changes in high school completion rates for middle- and upper-income Hispanic youth because they fluctuated considerably during this period. Yet overall, these data indicate that Hispanics' high school completion rates did not change significantly during this period.

College Participation of Low-Income Youth

Given the low high school completion rate of low-income African American and Hispanic youth, and given that less than one-third of low-income African American and Hispanic high school graduates enroll in college, one realizes that as a nation we have not come close to addressing the postsecondary educational needs of low-income minority youth. Since the mid-1970s the college participation of African Americans and Hispanics has been a picture not of progress but of major regression. College participation of minority youth from low-income families, particularly males, has declined severely.

African Americans

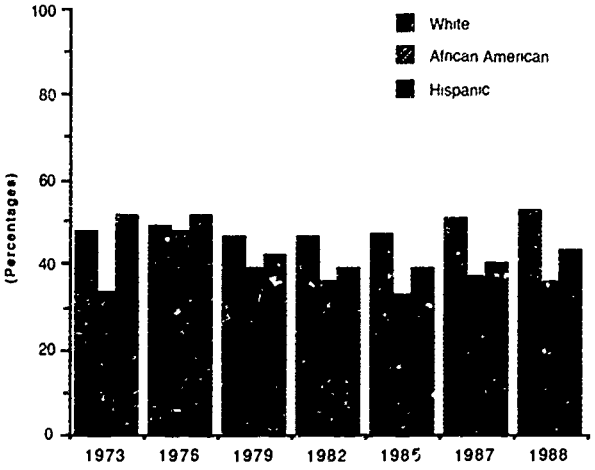
As shown in Table A-6, the college participation rate of African American high school graduates from low-income families dropped from nearly 40 percent in 1976 to 30 percent in 1988. By comparison, the rate for low-income whites declined from 37 percent in 1976 to just under 32 percent in 1985, then rebounded to nearly 39 percent by 1988. Between 1985 and 1988, low-income African American youth regained only a small portion of the ground they lost in the late 1970s and early 1980s.

Analyzing these rates by gender for low-income youth shows a bleaker situation for young African American males than for African American females. In 1988, only 23 percent of low-income African American men 18 to 24 years old were enrolled in college, compared to 37.2 percent 13 years earlier. The college participation rate of low-income African American women declined from 41.7 percent to 35.6 percent during the same period. (Due to the size of the sample for low-income African American women, this decline is not statistically significant.) When including the 40 percent of low-income African Americans who did not complete high school, we end up with dismal college participation rates of 12 percent to 16 percent for low-income African American males and approximately 25 percent for African American females from families at this income level (1987 and 1988). This compares to about 30 percent of all 18-to-24-year-olds who were enrolled in college in the same years.

Hispanics

Although the college participation rates by income for Hispanics may have limited reliability because of possible sampling error in the data, there is a strong indication that the percentage of low-income Hispanics enrolled in college also dropped by a sizable margin between 1976 and 1988. If these data are accurate, the proportion of 18-to-24-year-old low-income Hispanic high school graduates enrolled in college fell by 15 percentage points, from 50.4 percent in 1976 to 35.3 percent in 1988. It appears that most of this decline resulted from the tremendous drop in college participation by Hispanic males. Since Hispanics complete high school at substantially lower rates than other groups, this decline indicates an educational failure rate of intolerable magnitude.

Figure 6
Enrolled-in-College Participation Rates of Dependent 18-to-24-Year-Old High School Graduates



Source: Bureau of the Census, "Current Population Reports," Series P-20, various years

College Participation of Middle-Income Youth

As stated earlier, higher percentages of African American and Hispanic high school graduates attended college during the mid-1970s than in the late 1980s. This was due in large part to the higher college participation rates of African American and Hispanic youth from middle-income families during the earlier period. If Census data accurately reflect college participation patterns for the period of the mid-1970s, the proportion of middle-income African Americans and Hispanics enrolled in college was equal to, and in some cases higher than, white middle-income youth. Assuming this parity actually existed, it was short-lived. As of 1988, proportionately fewer African American and Hispanic middle-income youth enrolled in college than during the mid-1970s. These declines contrast to the relative stability in college enrollment rates for middle-income whites during this period.

African Americans

In 1988, just over one-third of African American middle-income 18-to-24-year-old high school graduates were enrolled in college, compared to more than half of graduates in 1976. Again, as with low-income African Americans, the decline was more pronounced for males than for females. The enrolled-in-college rate of middle-income African American males dropped from 53.2 percent in 1976 to 28.1 percent in 1988. Comparable figures for African American women from middle-income families were 52.2 percent in 1976 and 44.1 percent in 1988. Comparisons between middle-income African American males and white males also are disturbing, since white males in this category achieved a college participation rate of 42.4 percent in 1976 and 48.8 percent by 1988.

Based on the seven years analyzed, most of the decline in college participation for middle-income African Americans took place during the late 1970s and early 1980s, the same period in which college participation by low-income African American youth also fell. Since 1985, middle-income African American women appear gradually to have increased their college-going rates. Due to a relatively wide swing in the college participation rates of middle-income African American males between 1987 and 1988, it is difficult to make a definitive statement about changes in their participation pattern in this period. However, for both middle-income African American men and women, it does not appear as though they will recoup the higher college participation levels they achieved in the mid-1970s within the next few years. Combined with the declines in college-going rates for low-income African American youth, African Americans continue to suffer disproportionately lower college-entry rates than whites. If whites continue to enter college at an increased rate, as they did between 1985 and 1988, and African Americans continue to make relatively little progress or suffer actual declines, surely the gap in the college-going rates of the two groups will widen further.

Hispanics

Caution again must be exercised in identifying changes in the college participation rates of middle-income Hispanics. However, it appears that the percentage of middle-income Hispanic youngsters enrolled in higher education dropped between 1976 and 1988. In 1976, 53.4 percent of middle-income Hispanic high school graduates attended college, compared to 38.5 percent in 1987 and 46.4 percent in 1988. It is not possible to report this data by gender for dependent students, but the available data show slightly larger declines for middle-income Hispanic men than for Hispanic women. Since there were more middle-income African Americans than middle-income Hispanics in the 18-to-24-year-old population during this period, more definitive statements can be made about African Americans' college participation.

Several Factors Affecting College Participation

College Aspirations

The declines in college participation for low- and middle-income African Americans are in sharp contrast to the increased aspirations of African American youth to attend college. The results of a national survey of post-high school plans and aspirations of African American and white high school seniors showed no change in values or motivation toward college entry among African American seniors that could account for this decline in participation.[6] Between 1976 and 1985, "plans and aspirations to complete four years of college increased among both African American and white high school seniors, with slightly smaller increases among Blacks than among whites."[7] However, the survey concluded that while white youngsters' chances for college entrance increased during this period, the opposite was true for Black youth. According to this same study, plans and aspirations of high school seniors to enter the armed forces increased among both groups, with slightly larger increases among African Americans than among whites.

Tests and Admissions Standards

During the last 10 years, the greatest improvement in standardized test scores—SAT and ACT—has been among African American and Hispanic high school students.[8] College-bound minority students also have made significant gains in high school math, science, and foreign language course-taking during this same period.[9] Although the test scores and the college-preparatory course enrollment patterns of African Americans, Hispanics, and American Indians continue to lag behind those of whites and Asian Americans, these students are better prepared for college than their predecessors. These gains, however, have not been translated into larger percentages of these students entering college. This may be due in part to increased stringency in admission standards of many colleges and universities

In recent years, the movement for "excellence" within the educational community has provided the impetus for a number of states to raise their exit criteria from high school and their admission standards to state institutions. As of 1985, nearly 30 states had increased their undergraduate admissions criteria for public colleges and universities.[10] These changes include increased high school curricular requirements or higher SAT or ACT test scores, or both. The stiffer course requirements occurred most frequently in mathematics, followed by social science, English and laboratory sciences.[11] Approximately one-third of the state colleges surveyed indicated that they planned to increase the use of tests particularly for entry to technical fields and highly specialized courses. Since African American, Hispanic, and American Indian students do not perform as well as whites and Asian Americans on standardized tests, tend to graduate from high school with lower grade point averages, and take fewer college-preparatory courses, one would expect that these revised standards are having a disproportionately negative impact on the college entry of students from these groups.

Military Recruitment

Because of increased selectivity and benefits within the armed forces, the military is becoming more competitive with colleges in recruiting high-ability, college-eligible African Americans. A recent report by the Congressional Budget Office showed that although the military recruited proportionately fewer African Americans in 1987 than in 1980, larger percentages of high-ability, middle- and upper-income African Americans were recruited in 1987 than in 1980. As of 1987, "Black and white recruits tended to come from different socioeconomic strata within their respective populations, with Black recruits coming disproportionately from areas with above-average Black incomes and better-educated Black adults. Only 44 percent of Black male active-duty recruits in 1987 came from areas in the bottom half of the income distribution for Black families, compared with almost 55 percent of the white recruits (relative to white incomes)."[12] This recruitment pattern of African Americans represented a marked change from 1980, when Black recruits were drawn much more heavily from lower income levels.

Student Financial Aid

It is very likely that events in the student aid world had a good deal to do with the upward swing in college participation experienced by African Americans, Hispanics, and white women during the mid-1970s.[13] Various studies indicate that student aid programs can and did increase the college-going rates of low-income students.[14,15] During the 1970s the Pell Grant program reached its highest funding level. Additionally, many young veterans attended college through the GI Bill. The Eureka Project's study of student financial aid and educational opportunities in California stated that:

> In the mid-1970s students from very low-income families were bringing down the median income of minority families with children in college. By the 1976–78 period, median incomes for all the minority categories shown were distinctly lower, even while the median for all families with male students in college was tending to rise and, for all families with female student members, the median declined by a much smaller amount. There is thus a good deal of explaining to do on any assumption except that college was becoming a more viable option for precisely those members of the largest minority groups who would most need and depend on student aid.[16]

The report concluded by stating that expansion of the student aid system in the 1960s and 1970s enabled more low-income and minority students to attend college despite reductions in the value of aid awards in the late 1970s caused by inflation. Without question, changes in the structure of current student aid programs could have a revitalizing effect on the college entrance rates of these groups, and thus mitigate not only the problem of lower college access for African Americans and Hispanics but of low degree attainment.

Degrees Conferred

The total number of degrees conferred rose 4.7 percent from 1976 to 1987, as shown in Table 3. According to the National Center for Education Statistics, the number of bachelor's degrees awarded rose 7.9 percent and the number of first-professional degrees grew by 15.4 percent. During the same period, the number of master's degrees awarded fell 6.4 percent. Based on the most recent data available from the doctorate records file of the National Research Council (NRC), the number of doctorates earned rose 8.4 percent from 1978 to 1988 (see Table 6). Due to noncomparable data, the change in the number of associate degrees granted during either period could not be determined.

As in recent years, when these figures are analyzed by gender, a different pattern emerges. the overall decreases in the number of men receiving degrees mask significant growth in the number of women earning degrees.

Between 1976 and 1987, the total degrees earned by men fell by almost 53,000 (a 7.1 percent drop), while the number granted to women grew by more than 115,000 (almost a 20 percent gain). Women achieved gains at all levels. 21.9 percent in bachelor's degrees, 3 percent in master's degrees and 158.2 percent in first-professional degrees. According to NRC data, the gains women experienced at the doctorate level between 1978 to 1988 were similarly high, at 41.7 percent. Conversely, the number of degrees awarded to men fell in all categories: 3.8 percent in bachelor's degrees, 14.6 percent in master's degrees, and 11.2 percent in first-professional degrees. The number of Ph.D.s awarded to men fell 3.9 percent between 1978 and 1988. However, these figures include degrees awarded to non-U.S. citizens, and the loss in the number of male doctorates is magnified when based solely on degrees earned by U.S. citizens, particularly at the doctorate level. As a portion of all Ph.D.s granted, doctorates awarded to male U.S. citizens plummeted 23.8 percent from 1978 to 1988, due largely to decreases in degrees awarded to white and African American males. In addition, the number of master's degrees awarded to U.S. men dropped 21.7 percent between 1976 and 1987.

When broken down by race/ethnicity, the data paint yet a different picture, with the bulk of the losses experienced by males attributed to African American and white males. Because of these losses, gains made by Hispanic and Asian American males did not increase the aggregate totals.

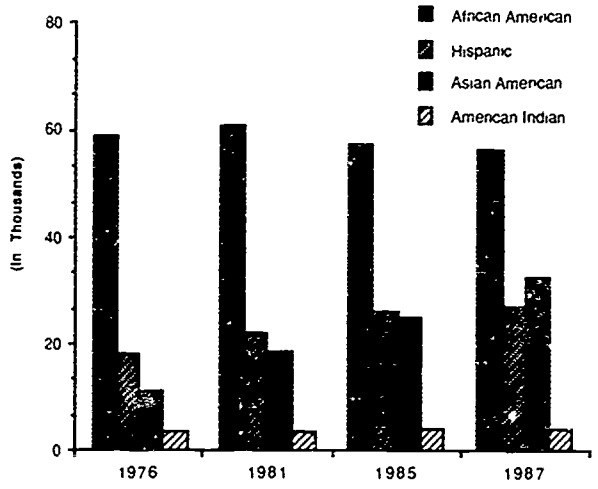
Degrees Conferred by Race/Ethnicity

1976 to 1987

As a group, the number of earned degrees by minorities increased from 1976 to 1987, with jumps of 30.9 percent in bachelor's degrees and 63.4 percent for first-professional degrees. At the doctorate level, minorities earned 7 6 percent more Ph.D.s in 1988 than they did in 1978. Yet again, the accelerated movement of women into degree programs boosted these numbers, hiding some losses by minority men, especially African American men. With the exception of African American women at the master's level, women in all groups achieved significant gains at all degree levels.

Table 5 shows that the number of master's degrees awarded to minorities as a group changed little from 1976 to 1987. Yet this apparent stagnation camouflages sharp decreases among African Americans earning degrees (31.8 percent), significant gains in the number of Hispanic and American Indian degree recipients (32.9 percent and 41.4 percent) and a doubling in the number of Asian Americans receiving degrees.

Figure 7
Bachelor's Degrees Awarded to Minorities



Source National Center for Education Statistics "Degrees and Other Formal Awards Conferred" surveys

African Americans

African Americans continued to sustain the greatest losses among all racial/ethnic groups, and these losses have been accelerated by the disappearance of African American males from college campuses. With the exception of first-professional degrees, the number of African Americans receiving degrees dwindled at all levels from 1976 to 1987. The rise in first-professional degrees (26.9 percent) was due solely to strides made by African American women, they earned twice as many first-professional degrees in 1987, offsetting the 8.9 percent drop in the number of these degrees earned by African American men.

In other degree categories, African American women's gains did not make up the losses experienced by African American men. From 1976 to 1987, the number of African Americans earning bachelor's degrees fell 4.3 percent overall, and 12.2 percent for African American males, the number of master's degrees earned by African Americans decreased by 31.8 percent overall and 34 percent for African American males. In addition, African American women experienced a 30.5 percent drop at the master's level. African Americans also posted declines in the number of Ph.D.s they received, with a 22.1 percent decrease from 1978 to 1988. Again, declines by African American males attributed greatly to this loss: African American males earned 46.7 percent fewer Ph.D.s in 1988 than they did in 1978. Unlike other groups, African American females now outnumber African American males earning doctorates. Hispanic males and Asian American males now outstrip African American males in the number of degree awards.

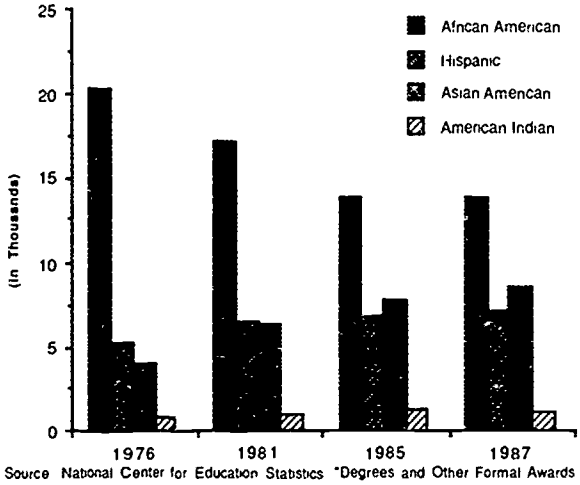
A comparison of 1986 enrollment figures with the number of degrees earned by African Americans in 1987 indicates that proportionately fewer Blacks are completing degrees than are enrolled. For example, while African Americans represent 9.2 percent of the 1986 undergraduate population, they earned only 5.7 percent of the bachelor's degrees awarded in 1987. Though the gap between enrollment percentage and degree percentage is not as striking at other degree levels, African Americans are still underrepresented, whereas whites are overrepresented. At the bachelor's level, 79.2 percent of undergraduates in 1986 were white, yet whites earned 87.5 percent of all bachelor's degrees in 1987.

Hispanics

Hispanic Americans also were underrepresented when comparing enrollment to degrees earned. The percentage of Hispanic undergraduates in 1986 (5.3 percent) was almost double the percentage of degrees granted to Hispanic Americans (2.7 percent). Hispanic students represented 3.2 percent of graduate school enrollment in 1986, yet they earned only 2.4 percent of all master's and doctorate degrees in 1987.

Despite this underrepresentation, Hispanics have registered impressive increases in the number of degrees earned between 1976 and 1987. However, women again accounted for a large segment of the gains. Overall increases in the number of degrees awarded to Hispanics between 1976 and 1987 were as follows. 50.3 percent at the bachelor's level, 32.9 percent at the master's level and 90.1 percent at the first-professional level. During the same period, Hispanic women were granted 1.5 times the number of bachelor's and master's degrees as in 1976, and quadruple the number of first-professional degrees. From 1978 to 1988, the number of doctorate degrees earned by Hispanics also rose by 25.6 percent, with Hispanic women receiving 75 percent more Ph.D.s in 1988.

Figure 8
Master's Degrees Awarded to Minorities



Source National Center for Education Statistics "Degrees and Other Formal Awards Conferred" surveys

Asian Americans

Asian Americans continued their upward strides, with gains at all levels. They more than doubled their number of first-professional degrees and master's degrees, and they tripled their number of bachelor's degrees. While Asian American women accounted for a substantial portion of those gains, posting larger increases than their male counterparts at all levels, Asian American men had the most significant increases of all minority males (see Tables 6–9).

The number of Ph.D.s earned by Asian Americans increased by 56.9 percent, from 390 in 1978 to 612 in 1988. Yet it is important to note that the number of doctorates granted to Asians who are non-U.S. citizens almost doubled, from 2,116 in 1980 to 4,131 in 1988. When examining the total number of doctorates earned by Asians, NRC data shows that 4,131 of 4,771, or 85.6 percent, were earned by Asians who are non-U.S. citizens.

American Indians

The statistics for American Indians were mixed; overall gains at all levels concealed a small drop in the number of men receiving bachelor's degrees. With American Indians in particular, it is important to note that the number of degrees awarded was so small at the beginning of the period that any numerical gains translated into dramatic percentage increases. For instance, while the number of American Indian women earning first-professional degrees more than quadrupled from 1976 to 1987, this actually represented an increase from only 26 to 121 (see Table 7).

Comparing 1986 enrollment statistics to 1987 degree totals shows that American Indians are underrepresented in earned bachelor's degrees. Although American Indians made up 0.8 percent of the undergraduate population in 1986, they received only 0.4 percent of baccalaureate degrees granted in 1987.

1985 to 1987

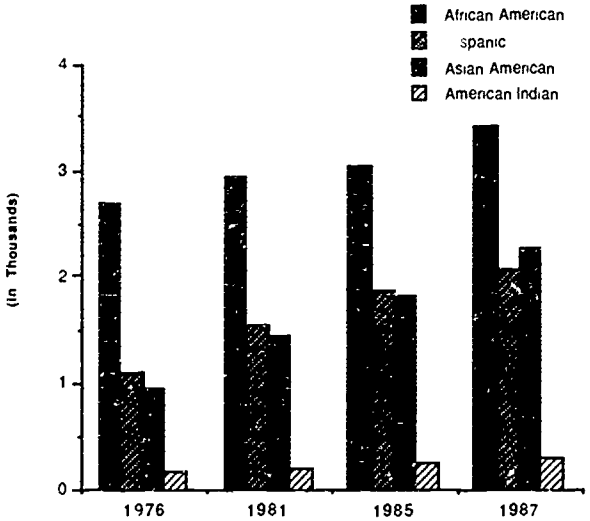
When examining minority degree completion tatistics over an extended period, percentage gains will appear to be fairly large. Therefore, studying a shorter time period can offer a different perspective. With a few exceptions, overall gains made by minorities from 1985 to 1987 were not impressive. However, at the first-professional degree level, both Asian Americans and American Indians had significant increases, and women in these groups scored gains of 27.9 percent and 68.1 percent. From 1985 to 1987, the losses experienced by African American males at most degree levels stabilized. During this period, the decline in master's degrees for African Americans—both male and female—leveled off, as did the number of bachelor's degrees awarded to African American men, slowing a decline of 10.2 percent from 1976 to 1985. In addition, the number of African American males earning first-professional degrees jumped by 13.1 percent during this two-year period, reversing a nine-year downward trend.

Data from the two-year period also indicate some backsliding in long-term gains. American Indians experienced moderate decreases in the number of bachelor's degrees (6.4 percent) and master's degrees (11.9 percent) they received.

Table 8 shows the number of associate degrees earned by minorities remained stable during this period. At this level, women outnumbered men in all groups, with the exceptions of Asian Americans and nonresident aliens. Hispanic women earned 1,800 more degrees than Hispanic men; African American women were granted 7,500 more associate degrees than African American men; white women received 45,000 more degrees than white men; and American Indian women were awarded 600 more degrees than American Indian men.

Overall, some minority groups posted significant gains in associate degrees from 1985 to 1987: the number conferred on Asian Americans increased by 19.0 percent, and American Indians also posted an 8.3 percent gain. The number of degrees granted to Hispanics and Blacks changed little from 1985 to 1987.

Figure 9
First-Professional Degrees Awarded to Minorities



Source National Center for Education S atistics "Degrees and Other Formal Awards Conferred" surveys

Degrees Conferred By Field

Based on changes in bachelor's and master's degrees awarded in 1985 and 1987, it appears that the exodus of students from the field of education may be leveling off and that students are returning at a very modest rate to the social sciences. As Tables 9 and 10 indicate, both fields had experienced large decreases between 1976 and 1985. The growth in the number of bachelor's and master's degrees conferred in business also slowed during the most recent two-year period. Women continue to enter this field in large numbers, however, men still earn the majority of business degrees.

The number of engineering degrees, which increased between 1976 and 1985, leveled off at the bachelor's level from 1985 to 1987. The number of women earning engineering baccalaureates grew almost seven-fold between 1976 and 1985; this expansion stabilized from 1985 to 1987. However, the number continued to grow at the master's level for the 1985-87 period, making it the third most popular choice for a master's degree.

The migration of baccalaureate students from biological/life sciences, evidenced by significant declines from 1976 to 1985, also stabilized. The health professions, however, witnessed the reverse trend. At both the bachelor's and master's levels, the field posted significant increases over the 11-year period, yet from 1985 to 1987, only slight gains were recorded for master's degrees and little change occurred at the bachelor's level. Also, men are moving out of this field, with the number of bachelor's and master's earned by men falling 19.5 percent and 7.2 percent, respectively.

Table 10 also reveals a dramatic fluctuation in public affairs degrees awarded. The number of master's degrees in this field dropped by 11 percent from 1976 to 1985 but grew by 13.1 percent from 1985 to 1987. This fluctuation can be traced to a decrease of almost 4,000 men earning public affairs degrees between 1976 and 1985 and then an upsurge of almost 1,000 men in 1987.

With some exceptions, degrees awarded to minorities did not differ much from the overall picture. Tables 9 and 10 show the fields in which minorities earned the highest number of bachelor's and master's degrees. In 1987, the top three bachelor's degree fields for majority students were business, social science, and education, however, minority students were concentrated more heavily in business, social science, and engineering. The continuing influx of Asian Americans and other minority women into engineering, plus the flight of minority students from education, pushed engineering into third place.

The drop in education degrees awarded at the bachelor's and master's levels was amplified in minority groups, for both the two-year period and the overall study period. Minorities had larger proportional gains in the number of bachelor's degrees in biological/life sciences and engineering than the overall percentage increases in these fields. The field of health sciences recorded dramatic gains for all minorities between 1976 and 1985, but these gains leveled off by 1987.

Table 10 reveals that, unlike the patterns for baccalaureate degrees, a master's degree in education remained the number one choice of minority students and students overall, and that the sharp declines in this field have leveled off somewhat, as evidenced by the 1985 to 1987 period. However, minorities experienced more dramatic declines in education (46.8 percent) and social science (33.7 percent) than the overall population, especially from 1985 and 1987. Conversely, minorities showed higher percentage gains in the business, engineering, and health professions than the general student population.

Minorities differed from the overall pattern in maintaining, rather than decreasing, the number of master's degrees in public affairs from 1976 to 1985. However, they did post a slight increase in these degrees in 1987. Similar to the overall master's population, this gain was due primarily to an upsurge in the number of men receiving such degrees, women continued to increase the number of master's in public affairs they received throughout the 11-year period. Despite this influx, engineering replaced public affairs in 1987 as the third most popular degree for minority students, due to the more significant jumps in engineering master's degrees earned primarily by Asian Americans.

African Americans

African Americans' representation in baccalaureate and master's education and social science fields fell drastically between 1976 and 1987. The number of bachelor's degrees in education and the social sciences plummeted by 10,000 and more than 5,000, respectively. At the master's level, the corresponding numbers dropped by 7,000 and 400. Some might speculate that these statistics indicate that African Americans are branching out into other professions. Yet these losses were not recovered by comparable gains in other fields, especially at the master's level, where the lower number of education degrees awarded to African Americans essentially accounts for the nose-dive in all master's granted to African Americans— from 20,345 in 1976 to 13,867 in 1987.

The flight from education was most obvious with African American women. the number of education degrees they earned plunged from 10,509 in 1976 to 2,905 in 1987 at the bachelor's level and from 8,769 in 1976 to 4,123 in 1987 at the master's level. Unlike African American males, African American women did branch out to other fields, with some impressive gains in engineering and business. However, as Tables 9 and 10 indicate, African American women are outnumbered by Asian American women in

engineering baccalaureates and master's degrees, and Asian American women's gains were more dramatic at the master's level in business degrees.

Between 1976 and 1985, African American males did experience slight gains at both the bachelor's and master's levels in business and engineering, though the increase in bachelor's degrees in business leveled off from 1985 to 1987. In almost all other fields, the number of African American males earning bachelor's and master's degrees declined. Some exceptions included a slight increase in the number of African American males earning bachelor's degrees in the health professions, though this dropped in 1987, and a 1987 resurgence in the number of African American males earning master's degrees in public affairs.

Hispanics

The statistics on degree attainment for Hispanics were similar to those for African Americans. With the exception of bachelor's degrees in education, Hispanic women posted substantial gains in all fields at both baccalaureate and master's levels. At the bachelor's level, in 1987 Hispanic women earned more than six times as many business degrees, twice as many biological/life sciences degrees, and 10 times as many engineering degrees as did their predecessors in 1976. Hispanic women also were granted eight times as many master's degrees in business, three times as many in health professions, and almost nine times as many in engineering.

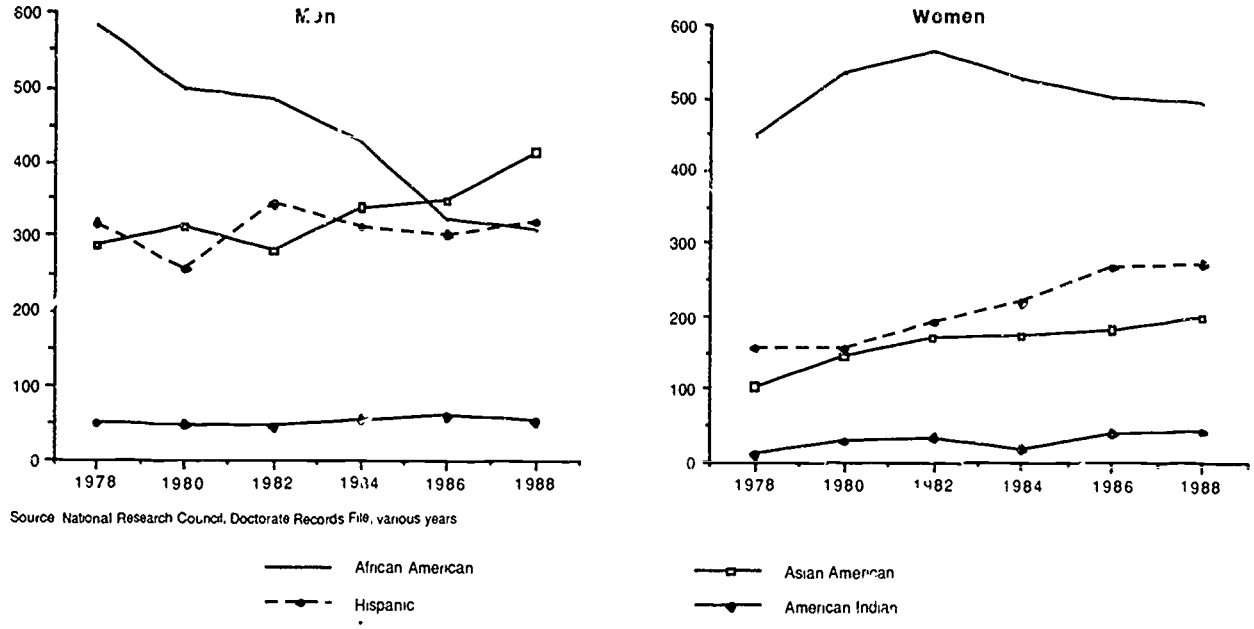
While the portrait for Hispanic men was not as bleak as for African American men, the number of Hispanic men earning degrees dropped sizably in many fields, including education, social science, and the health professions, at the bachelor's and master's levels. Between 1976 and 1987 their most impressive gains were in business and engineering at both the baccalaureate and master's levels, along with a moderate increase in the number of master's degrees earned in public affairs.

American Indians

For the most part, the degree patterns of American Indians followed the patterns for minorities as a whole. However, at both the bachelor's and master's levels, the number of American Indians earning degrees steadily increased from 1976 to 1985, then took a downturn from 1985 to 1987. This trend was especially evident in master's degrees awarded in education and business. The number of education degrees awarded rose from 390 to 468 between 1976 and 1985 but dropped to 375 in 1987. Business degrees jumped from 71 to 271 during the earlier period, then fell to 170 in 1987.

Although some percentage gains for American Indians are quite high, it is important to keep in mind the actual numbers. American Indians have made enormous strides, yet in most fields their numbers among degree-holders do not even reach 500 at the baccalaureate level or 100 at the master's level. This is especially true for American Indian women, who noted substantial increases during the 11-year period. In business, they earned five times as many bachelor's degrees in 1987 as in 1976 (383 to 76), and eight times as many master's degrees (58 to 7). Also in engineering, they increased their numbers among bachelor's degree recipients from two to 30 and among master's degree recipients from zero to six. Yet American Indian men greatly outnumber American Indian women earning bachelor's and master's degrees in most fields, with two exceptions: education and the health professions. In these two fields, American Indian women outnumbered their male counterparts at the bachelor's and master's levels—e.g., in 1987, five women earned bachelor's degrees in the health professions for each male who did so.

Figure 10
Doctorates Awarded to Minority Men and Women, 1978 to 1988



Source National Research Council, Doctorate Records File, various years

Asian Americans

While the stereotype of Asian American students might suggest that engineering or biological/life sciences would be their first choice in a bachelor's degree program, business has been and continues to be their number one choice. Unlike most minority groups, the largest number of bachelor's degrees for Asian Americans were in business, social science, and engineering, in 1976 and business, engineering and social science in 1987.

The gains made by Asian Americans in the 11-year period did not evaporate in the most recent two-year study As with other groups, these gains were supported largely by the number of degrees awarded to women. Almost six times as many Asian American women earned a bachelor's in business in 1987 as in 1976, and more than 20 times the number of Asian American women were granted bachelor's degrees in engineering.

Like all other groups, Asian Americans experienced significant decreases in the number of education master's degrees, but they were the only group to post sizable increases in the number of education bachelor's degrees. At the bachelor's level, Asian Americans had registered increases of more than 40 percent in education degrees for both the 11-year period and from 1985 to 1987. The decrease in the number of master's degrees in education earned by Asian Americans was the only decline they posted in the fields listed in Tables 9 and 10.

Over the 11-year period, Asian Americans solidified their concentration in engineering, with this field becoming their number two choice at the master's level. At the baccalaureate level, Asian Americans received 29.1 percent of all engineering degrees conferred to minorities in 1976; this proportion grew to 55 percent in 1987. At the master's level, they represented half of all minority-earned degrees in engineering in 1976 and almost two-thirds in 1987.

Non-U.S. Citizens

Non-U.S. citizens were concentrated in business and engineering at both the bachelor's and master's level. Significantly, 8.1 percent of all bachelor's degrees in engineering and 27.2 percent of all master's were earned by non-U.S. citizens in 1987. In comparison, minorities earned 13.9 percent of engineering bachelor's degrees and only 12.2 percent of engineering master's degrees. (As mentioned previously, a substantial portion of those degrees were attributable to Asian Americans. In the doctorate statistics, the NRC distinguishes non-U.S. citizens by race/ethnicity and shows that a large fraction of non-U.S. doctorate-holders in science and engineering fields are of Asian origin. If NCES data were available in this form, it might show the same trends.)

Doctorate Trends

Similar trends in subject choices were apparent at the doctorate level, with education remaining the number one choice for all students, despite a large slippage (16.3 percent) between 1980 and 1988. National Research Council data (see Table 11) show that life sciences and social sciences were the second and third most popular fields among doctoral candidates. Life sciences, along with physical science and engineering, experienced significant gains in the number of Ph.D.s awarded, yet a substantial portion of these increases were due to a surge of 2,181 non-U.S. citizens earning Ph.D.s in these fields. From 1980

to 1988, the number of Ph.D.s granted to non-U.S. citizens grew from one-quarter to one-third of all doctorates in these three areas. Engineering was the only field to experience a significant increase in Ph.D.s awarded, while humanities and social science Ph.D.s dropped slightly.

Minorities collectively had the same Ph.D. degree patterns in terms of field choice as the overall doctorate population. Yet as with education degrees at the bachelor's and master's levels, the number of doctorates in education fell more dramatically for minorities than for all other groups. In 1980, 42.6 percent of all Ph.D.s awarded to minorities were in education, but in 1988 the figure was 30.3 percent. Also, while minorities as a group posted significant gains in engineering, life sciences, and physical sciences, these increases were due primarily to jumps in the number of Asian Americans earning Ph.D.s in these fields.

For African Americans, education also remained the number one choice for a Ph.D. specialty. Yet unlike other minorities, the second and third most popular Ph.D. degree choices for African Americans were life sciences and professional fields. Despite substantial drops from 1980 to 1988 in the number of doctorates in education (37.4 percent), humanities (20.6 percent), and social science (12.2 percent), African Americans experienced slight gains in other areas. However, their representation in other fields remains low; for example, though the number of Ph.D.s earned by African Americans in engineering increased by 72.7 percent from 1980 to 1988, the actual number rose from only 11 to 19.

Unlike all other minority and majority groups, Hispanic Americans increased the number of doctorates they received in all specialties. From 1980 to 1988, Hispanic Americans more than doubled the number of Ph.D.s they earned in engineering, life sciences, and physical sciences, raising their numbers above African Americans in all three fields. However, the majority of doctorates granted to Hispanic Americans were in education, social sciences, and humanities, with 63.8 percent of all doctorates earned by Hispanic Americans concentrated in those three fields.

Asian Americans experienced a loss in the number of doctorates in only one field from 1980 to 1988. a 7.5 percent decrease in the humanities. As also noted in the trends for bachelor's and master's degrees, Asian Americans became more concentrated in the sciences at the doctoral level. The three most popular degree fields for Asian Americans earning Ph.D.s were engineering, life sciences, and physical sciences. In 1980, Asian Americans earned 54.6 percent of their doctorates in these three areas; by 1988, this proportion had risen to 61.9 percent.

The number of doctorates awarded to American Indians in most fields increased from 1980 to 1988, but in several areas it remains in the single digits. For example, in engineering, the number of doctorates awarded to American Indians rose from three in 1980 to four in 1988.

As mentioned earlier, NRC data show some important trends with respect to non U.S. citizens. Unlike figures from the National Center for Education Statistics, the NRC reports its data separately for non-U.S. citizens by race/ethnicity, as well as by status (permanent versus temporary visas). NRC data shows that in 1988, the majority (53 percent) of non-U.S. citizens earning Ph.D.s were Asian, a significant proportion were white (30.1 percent), and smaller fractions were Black (5.6 percent) and Hispanic (5.7 percent).

Similar to Asian Americans, Asian non-U.S. citizens are concentrated in engineering, life sciences, and physical sciences, earning 69 percent of all their degrees in these three fields. In addition, the number of Asians studying under permanent visas declined slightly (3.6 percent) between 1980 and 1988, and five times as many Asians earned degree on temporary visas than on permanent visas.

Conversely, the number of non-U.S. Blacks with permanent visas doubled during the period, while the number of Blacks with temporary visas declined by 12.7 percent. Blacks who are not U.S. citizens displayed degree choices similar to African Americans with some differences between those with permanent visas and those with temporary visas. The number of Blacks with permanent visas earning life science doctorates more than tripled between 1980 and 1988, 73 percent of all doctorates granted to Blacks with permanent visas were in education, life sciences, and social sciences. On the other hand, the number of Blacks with temporary visas receiving Ph.D.s in life sciences fell 11.8, percent between 1980 and 1988, yet this field still became the number one choice for this group because of a large drop (35.2 percent) in the number of education Ph.D.s they earned.

Unlike Hispanic Americans, Hispanic non-U.S. citizens earned most of their Ph.D.s in engineering, life sciences, and physical sciences. Life sciences was the most popular doctorate for Hispanic non-U.S. citizens with permanent or temporary visas, and one-third of all doctorates awarded to Hispanic non-U.S. citizens on temporary visas were in this field.

Overall, the number of Ph.D.s earned by Hispanic non-U.S. citizens with permanent and temporary visas increased between 1980 and 1988. Also, non-U.S. Hispanics with temporary visas earned 3.5 times the number of Ph.D.s earned by non-U.S. Hispanics with permanent visas.

Comparable patterns occurred with white non-U.S. citizens. The number of doctorates granted to non-U.S. whites increased for those with permanent and temporary visas, and degrees earned by individuals with temporary visas outnumbered degrees awarded to individuals with permanent visas by a ratio of 2.5 to 1. However, among non-U.S. whites a significant decline (32 percent) in the number of education Ph.D.s caused education to drop out of the top three field choices. In 1980, the top degree programs for non-U.S. whites were engineering, physical sciences, and education, in 1988, life sciences replaced education as the number three choice

Degrees Conferred By Historically Black Colleges and Universities

Historically Black Colleges and Universities (HBCUs) continue to award a significant portion of the degrees earned by African Americans, even though their enrollments represent only a small fraction of the total. However, the number of degrees conferred by these institutions decreased by 8.3 percent between 1982 and 1987, due primarily to declines in the number of bachelor's and master's degrees they awarded. Part of this decline may also be due to the closing, merging, or changing in status of four HBCUs between 1982 and 1987.

Table 12 shows that the number of baccalaureate degrees granted by HBCUs declined by 7.9 percent between 1982 and 1987, while the number of sub-baccalaureate degrees dropped by 17.3 percent. Master's degrees conferred by HBCUs decreased by 8.6 percent during the same period.

While only 10 of these institutions offer Ph.D. programs, the number of doctorates conferred by HBCUs more than doubled between 1982 and 1987. Conversely, the number of first-professional degrees awarded by HBCUs fell by 8.3 percent.

Degrees Conferred by Field

The NCES data in Table 13 show that HBCUs experienced fluctuations in many fields in the number of degrees earned between 1982 and 1987. Since 1982, business has remained the number one choice in bachelor's degrees for HBCU students, although the number of business baccalaureates increased by 14.5 percent between 1982 and 1985, then dropped by 12.0 percent.

Also at HBCUs, similar to overall trends, the number of bachelor's degrees in the fields of education and social sciences fell by 37.1 percent and 31.5 percent between 1982 and 1987. In engineering, the number of bachelor's degrees awarded by HBCUs declined by 5.7 percent.

At the master's and doctorate levels, education remained the number one choice for HBCU students. Yet, the number of master's degrees in education declined by 21.2 percent during the 1982–1987 period and the number of doctorates in education more than quadrupled. Education Ph.D.s comprised 46.9 percent of the doctorates awarded by Black institutions in 1987, and 47.6 percent of all master's degrees granted by HBCUs were in education.

Graduate degrees in engineering held steady between 1985 and 1987, after a modest increase between 1982 and 1985. At the master's level, the number of degrees awarded by HBCUs in engineering rose from 73 in 1982 to 110 in 1985 and 1987. Ph.D.s in engineering increased from one in 1982 to two in 1985, and dropped back to one in 1987.

Campus Efforts to Increase Minority Participation And Degree Attainment

Given the data presented in this report, comprehensive and sustained efforts are needed at the institutional level to recruit, retain, and graduate larger numbers of minority students. The activities undertaken to date have met with mixed success. A study of campus trends indicated that although a majority of colleges and universities have activities under way to increase minority participation on their campuses, 60 percent of all administrators surveyed rated their own institution's ability to attract African American students as "fair" or "poor."[17] Two-thirds said the same for attracting Hispanic students.

According to *Campus Trends 1989*, approximately 70 percent to 80 percent of the institutions stated that they had either "a lot" or "some" activity to improve minority participation. However, most colleges reported only "some" activity as opposed to "a lot." This included activities to:

- increase enrollment of minority students,
- expand financial support for minority students,
- increase retention of minority students,
- improve the campus climate for minority students,
- hold festivals or other events to "celebrate racial and ethnic diversity"; and
- increase the number of minority faculty.

Reported less frequently (5 percent to 60 percent of the institutions) were activities to:

- assist minority faculty in meeting tenure and promotion requirements;
- increase the number of senior administrators from minority backgrounds; and
- monitor minority enrollment, participation and completion rates.

Although most administrators perceive more commitment to minority participation on their campuses now—compared to 10 years ago—only one-third rated this level of commitment as high. Less than 30 percent of all institutions reported increased enrollment among African American, Hispanic, Asian American, or American Indian students, compared to 71 percent that indicated general enrollment gains. It has become apparent that some institutions have taken the lead in minority advancement on their campuses, while most are making few gains in this area.

The trends reported here underscore the need for more aggressive measures to increase college access and degree attainment by minority students on every college campus. Clearly this report provides a rationale for action.

Endnotes

1. Reginald Wilson and Deborah J. Carter, *Seventh Annual Status Report on Minorities in Higher Education* (Washington, D.C: American Council on Education), 1988, p. 3–5.
2. Ibid, p. 12.
3. National Commission on Student Financial Assistance, "Changes in College Participation Rates and Student Financial Assistance, 1969, 1974, 1981" (Washington, D.C.: Applied Systems Institute, Inc.), 1983.
4. John B. Lee, et. al., "Student Aid and Minority Enrollment" (Washington, D.C.: American Association of State Colleges and Universities), 1984.
5. Jerry Sheehan Davis and Kingston Johns, Jr., "Changes in Low Income Freshmen Participation in College, 1966 to 1986," *Journal of Student Financial Aid*, vol. 19, no. 1.
6. Robert M. Hauser, "Post-High School Plans of Black High School Graduates: What Has Changed Since the Mid-1970s?" (Wisconsin University, Madison: Center for Demography and Ecology), 1987, p. 4.
7. Ibid., p. 4.
8. Deborah J. Carter, *Racial and Ethnic Trends in College Participation and Enrollment*, (Washington, D.C.: American Council on Education, Research Briefs), 1990, vol. 1, no. 2, p. 2.
9. Educational Testing Service, *What Americans Study* (Princeton, N.J.. Educational Testing Service), 1989, p. 9.
10. Reginald Wilson and Sarah Melendez, *Fourth Annual Status Report on Minorities in Higher Education*, (Washington, D.C.: American Council on Education), 1985, p. 20.
11. Scott D. Thomson, College Admissions: *New Requirements by the State Universities* (Reston, VA.. National Association of Secondary School Principals), 1984, pp. 4–5.
12. The Congress of the United States Congressional Budget Office, *Social Representation in the U.S Military* (Washington, D.C.: U.S. Government Printing Office), 1989, p. xiii.
13. The Eureka Project, *The Critical Difference. Student Financial Aid and Educational Opportunities in California* (Sacramento, Ca.: The Eureka Project), 1988 pp. 30–41.
14. Ibid., pp. 7–8.
15. National Commission on Student Financial Assistance, "Changing Characteristics of Student Aid Recipients" (Washington, D.C.: National Commission on Student Financial Assistance), 1983.
16. Eureka, op. cit., p. 33.
17. Elaine El-Khawas, *Campus Trends, 1989* (Washington, D.C.: American Council on Education), 1989, pp. 5–8.

Tables

Table 1
High School Completion Rates and Enrolled-in-College Participation Rates of 18-to-24-Year-Olds by Race/Ethnicity, 1976 to 1988

(numbers in thousands)

	18-to-24-Year-Olds					14-to-24-Year-Olds
	Total Population	High School Graduates	High School Completion Rate (percentages)	Enrolled in College	Enrolled-in-College Participation Rate (percentages)	Ever Enrolled Participation Rate (percentages)
ALL RACES						
1976	26,919	21,677	80.5	7,181	33.1	53.4
1977	27,331	22,008	80.5	7,142	32.5	52.0
1978	27,647	22,309	80.7	6,995	31.4	51.4
1979	27,974	22,421	80.1	6,991	31.2	51.6
1980	28,130	22,745	80.8	7,226	31.8	51.1
1981	28,965	23,343	80.6	7,575	32.5	51.7
1982	28,846	23,291	80.7	7,678	33.0	52.7
1983	28,580	22,988	80.4	7,477	32.5	52.8
1984	28,031	22,870	81.6	7,591	33.2	53.0
1985	27,122	22,349	82.4	7,537	33.7	54.3
1986	26,512	21,766	82.1	7,397	34.0	54.8
1987	25,950	21,118	81.4	7,693	36.4	56.5
1988	25,733	20,900	81.2	7,791	37.2	57.5
WHITE						
1976	23,119	19,046	82.4	6,276	33.0	53.5
1977	23,430	19,292	82.3	6,209	32.2	52.1
1978	23,650	19,526	82.6	6,077	31.1	51.3
1979	23,895	19,614	82.1	6,119	31.2	51.7
1980	23,975	19,78[illegible]	82.5	6,334	32.0	51.4
1981	24,486	20,123	82.2	6,548	32.5	52.1
1982	24,206	19,944	82.4	6,593	33.1	53.1
1983	23,899	19,644	82.2	6,464	32.9	53.4
1984	23,347	19,374	83.0	6,526	33.7	53.8
1985	22,632	18,917	83.6	6,501	34.4	55.3
1986	22,008	18,280	83.1	6,239	34.1	55.3
1987	21,493	17,689	82.3	6,483	36.6	57.1
1988	21,261	17,491	82.3	6,659	38.1	58.6
AFRICAN AMERICAN						
1976	3,316	2,238	67.5	748	33.4	50.4
1977	3,387	2,287	67.5	722	31.6	46.9
1978	3,451	2,340	67.8	695	29.7	47.8
1979	3,511	2,356	67.1	696	29.5	48.4
1980	3,555	2,480	69.8	688	27.7	45.9
1981	3,779	2,680	70.9	749	27.9	44.8
1982	3,872	2,743	70.8	767	28.0	45.5
1983	3,865	2,741	70.9	742	27.1	45.0
1984	3,863	2,885	74.7	786	27.2	45.2
1985	3,716	2,809	75.6	734	26.1	43.8
1986	3,665	2,801	76.4	801	28.6	47.4
1987	3,603	2,739	76.0	823	30.0	48.7
1988	3,568	2,680	75.1	752	28.1	46.6

(continued)

Table 1 (continued)
High School Completion Rates and Enrolled-in-College Participation Rates of 18-to-24-Year-Olds by Race/Ethnicity, 1976 to 1988
(numbers in thousands)

	18-to-24-Year-Olds					14-to-24-Year-Olds
	Total Population	High School Graduates	High School Completion Rate (percentages)	Enrolled in College	Enrolled-in-College Participation Rate (percentages)	Ever Enrolled Participation Rate (percentages)
HISPANIC (a)						
1976	1,551	862	55.6	309	35.8	48.9
1977	1,609	880	54.7	277	31.5	43.8
1978	1,672	935	55.9	254	27.2	43.2
1979	1,754	968	55.2	292	30.2	45.7
1980	1,963	1,054	53.7	315	29.9	47.3
1981	2,052	1,144	55.8	342	29.9	45.8
1982	2,000	1,153	57.7	337	29.2	47.3
1983	2,025	1,110	54.8	349	31.4	48.4
1984	2,017	1,212	60.0	362	29.9	46.0
1985	2,223	1,396	62.8	375	26.9	46.7
1986	2,513	1,506	59.9	443	29.4	45.0
1987	2,592	1,597	61.2	455	28.5	44.2
1988	2,642	1,458	55.2	450	30.9	47.1

NOTE. College participation rates were calculated using high school graduates as the base. Thus, in 1976, 33.1 percent of high school graduates, 18-to-24 years old, were currently enrolled in college, and 53.4 percent of the high school graduates, 14 to 24 years old, were either enrolled in college or had completed one or more years of college.

The high school completion rates were calculated using the total population as the base. Thus, in 1976, 80.5 percent of the total population, 18-to-24 years old, had earned a high school diploma or a GED high school equivalency certificate or was enrolled in college.

Population and student counts shown here will differ from those in other tables because these others refer to population subsets defined by dependency status.

(a) Hispanics may be of any race.

Source: U.S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P-20, various years.

Table 2
Enrolled-in-College Participation Rates for 18-to-24-Year-Old High School Graduates by Race/Ethnicity and Sex, 1976 to 1988 (a)

(numbers in thousands)

	Total Population	High School Graduates (b)	Enrolled in College	Enrolled-in-College Participation Rate (percentages)
ALL RACES				
MEN				
1976	13,012	10,312	3,673	35.6
1977	13,218	10,440	3,712	35.6
1978	13,385	10,614	3,621	34.1
1979	13,571	10,657	3,508	32.9
1980	13,652	10,768	3,604	33.5
1981	14,127	11,052	3,833	34.7
1982	14,083	11,120	3,837	34.5
1983	14,003	10,906	3,820	35.0
1984	13,744	10,914	3,929	36.0
1985	13,199	10,614	3,749	35.3
1986	12,921	10,331	3,649	35.3
1987	12,626	10,030	3,867	38.6
1988	12,491	9,832	3,770	38.3
WOMEN				
1976	13,907	11,365	3,508	30.9
1977	14,113	11,569	3,431	29.7
1978	14,262	11,694	3,373	28.8
1979	14,403	11,763	3,482	29.6
1980	14,478	11,978	3,625	30.3
1981	14,838	12,290	3,741	30.4
1982	14,763	12,171	3,841	31.6
1983	14,577	12,082	3,657	30.3
1984	14,287	11,956	3,662	30.6
1985	13,923	11,736	3,788	32.3
1986	13,591	11,434	3,747	32.8
1987	13,324	11,086	3,826	34.5
1988	13,242	11,068	4,021	36.3
WHITE				
MEN				
1976	11,279	9,186	3,250	35.4
1977	11,445	9,263	3,286	35.5
1978	11,572	9,438	3,195	33.9
1979	11,721	9,457	3,104	32.8
1980	11,767	9,488	3,224	34.0
1981	12,040	9,619	3,340	34.7
1982	11,874	9,611	3,308	34.4
1983	11,787	9,411	3,335	35.4
1984	11,521	9,348	3,406	36.4
1985	11,108	9,077	3,254	35.8
1986	10,803	8,771	3,127	35.7
1987	10,549	8,498	3,289	38.7
1988	10,380	8,268	3,260	39.4
WOMEN				
1976	11,840	9,860	3,026	30.7
1977	11,985	10,029	2,923	29.1
1978	12,078	10,088	2,882	28.6
1979	12,174	10,157	3,015	29.7
1980	12,208	10,298	3,110	30.2
1981	12,446	10,504	3,208	30.5
1982	12,332	10,333	3,285	31.8
1983	12,112	10,233	3,129	30.6
1984	11,826	10,026	3,120	31.1
1985	11,524	9,840	3,247	33.0
1986	11,205	9,509	3,112	32.7
1987	10,944	9,189	3,192	34.7
1988	10,881	9,223	3,399	36.9

(continued)

Table 2 (continued)
Enrolled-in-College Participation Rates for 18-to-24-Year-Old High School Graduates by Race/Ethnicity and Sex, 1976 to 1988 (a)
(numbers in thousands)

	Total Population	High School Graduates (b)	Enrolled in College	Enrolled-in-College Participation Rate (percentages)
AFRICAN AMERICAN				
MEN				
1976	1,503	936	331	35.4
1977	1,528	970	309	31.9
1978	1,554	956	305	31.9
1979	1,577	973	304	31.2
1980	1,600	1,055	278	26.4
1981	1,730	1,154	325	28.2
1982	1,786	1,171	331	28.3
1983	1,807	1,202	331	27.5
1984	1,811	1,272	367	28.9
1985	1,720	1,244	345	27.7
1986	1,699	1,225	340	27.8
1987	1,666	1,188	377	31.7
1988	1,653	1,189	297	25.0
WOMEN				
1976	1,813	1,302	417	32.0
1977	1,859	1,317	413	31.4
1978	1,897	1,384	390	28.2
1979	1,934	1,383	392	28.3
1980	1,955	1,425	410	28.8
1981	2,049	1,526	424	27.8
1982	2,086	1,572	436	27.7
1983	2,058	1,539	411	26.7
1984	2,052	1,613	419	26.0
1985	1,996	1,565	389	24.9
1986	1,966	1,576	461	29.3
1987	1,937	1,550	445	28.7
1988	1,915	1,492	455	30.5
HISPANIC (c)				
MEN				
1976	701	378	150	39.7
1977	754	396	139	35.1
1978	781	420	126	30.0
1979	837	454	153	33.7
1980	971	497	4	31.0
1981	988	498	164	32.9
1982	944	519	141	27.2
1983	968	476	152	31.9
1984	956	549	154	28.1
1985	1,132	659	168	25.5
1986	1,338	772	224	29.0
1987	1,337	795	247	31.0
1988	1,375	724	228	31.5
WOMEN				
1976	850	483	160	33.1
1977	855	483	139	28.8
1978	891	516	128	24.8
1979	917	519	140	27.1
1980	992	556	160	28.8
1981	1,064	646	178	27.6
1982	1,056	634	196	30.9
1983	1,057	634	198	31.2
1984	1,061	661	207	31.3
1985	1,091	734	205	27.9
1986	1,175	737	220	29.9
1987	1,256	801	208	26.0
1988	1,267	736	223	30.3

(a) Totals differ from those shown in other tables for 18 to 24 year olds who are dependent primary family members. The Current Population Survey samples are derived from the decennial census of the U.S. population.

(b) The number of high school graduates was calculated by adding the numbers of individuals in this age group enrolled in college as of October of that year and the number of high school graduates not enrolled in college; these figures include individuals who enrolled in college without receiving a high school diploma or a GED. Several states do not require entering junior college students to have a diploma or GED. Therefore, these high school completion figures will be slightly higher than figures that do not include this relatively small population.

(c) Hispanics may be of any race.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P-20, various years.

Table 3
Bachelor's Degrees and Higher Awards, 1976, 1985 and 1987 (a)

Year		Bachelor's	Master's	First-Professional	Total (b)
1976	Total	918,388	309,263	62,085	1,323,523
	Men	499,602	165,474	52,365	743,451
	Women	418,786	143,789	9,720	580,072
1985	Total	968,311	280,421	71,057	1,352 046
	Men	476,148	139,417	47,501	684,362
	Women	492,163	141,004	23,556	667,734
1987	Total	991,264	289,349	71,617	1,386,271
	Men	480,782	141,269	46,523	690,635
	Women	510,482	148,080	25,094	695,636
Percentage Change 1976–1987	Total	7.9%	–6.4%	15.4%	4.7%
	Men	–3.8%	–14.6%	–11.2%	–7.1%
	Women	21.9%	3.0%	158.2%	19.9%

(a) Totals do not include figures from NCES' "race unknown" categories

(b) Total includes the number of doctorate degrees granted each year. Doctorate degrees were not shown because NCES doctorate figures differ slightly from the NRC data presented later in this report.

Sources. U.S. Department of Education, Office for Civil Rights, Data on Earned Degrees Conferred from Institutions of Higher Education, by Race Ethnicity and Sex, 1975–1976." U S Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987

Table 4
Bachelor's Degrees by Race/Ethnicity and Sex for Selected Years (a)

	1976 Total	Percent	1981 Total	Percent	1985 Total	Percent	1987 Total	Percent	Percent Change 1976–87	Percent Change 1985–87
Total	918,388	100.0	934,800	100.0	968,311	100.0	991,264	100.0	7.9	2.4
Men	499,602	54.4 (b)	469,625	50.2	476,148	49.2	480,782	48.5	–3.8	1.0
Women	418,786	45.6 (c)	465,175	49.8	492,163	50.8	510,482	51 5	21.9	3.7
Minority	91,777	10.0 (d)	104,892	11.2	112,988	11.7	120,139	12.1	30.9	6.3
Men	44,039	8.8 (e)	47,128	10.0	50,972	10.7	54,433	11.3	23.6	6.8
Women	47,738	11.4 (f)	57,764	12.4	62,106	12.6	65,706	12.9	37 6	5.8
Hispanic	17,964	2.0	21,832	2.3	25,874	2.7	26,991	2.7	50.3	4.3
Men	10,171	2.0	10,810	2.3	12,402	2.6	12,865	2.7	26.5	3.7
Women	7,793	1.9	11,022	2.4	13,472	2.7	14,127	2.8	81.3	4.9
African American (non-Hispanic)	59,122	6.4	60,673	6.5	57,473	5 9	56,554	5.7	–4 3	–1.6
Men	25,634	5.1	24,511	5.2	23,018	4.8	22,498	4.7	–12.2	–2.3
Women	33,488	8.0	36,162	7 8	34,455	7.0	34,056	6.7	1.7	–1.2
White (non-Hispanic)	811,599	88.4	807,319	86.4	826,106	85.3	841,821	84.9	3.7	1.9
Men	444,682	89.0	406,173	86.5	405,085	85.1	406,751	84.6	–8.5	0.4
Women	366,917	87.6	401,146	86.2	421,021	85.5	435,070	85.2	18.6	3.3
Asian American (g)	11,193	1.2	18,794	2.0	25,395	2.6	32,619	3.3	191.4	28.4
Men	6,318	1.3	10,107	2.2	13,554	2.8	17,250	3.6	173.0	27.3
Women	4,875	1.2	8,687	1.9	11,841	2.4	15,370	3.0	215.3	29.8
American Indian	3,498	0.4	3,593	0.4	4,246	0.4	3,975	0.4	13.6	–6.4
Men	1,916	0.4	1,700	0.4	1,998	0.4	1,820	0.4	–5.0	–8.9
Women	1,582	0.4	1,893	0 4	2,248	0 5	2,153	0.4	36.1	–4.2
Nonresident alien	15,012	1.6	22,589	2.4	29,217	3.0	29,305	3.0	95 2	0.3
Men	10,881	2.2	16,324	3.5	20,091	4.2	19,598	4 1	80.1	–2.5
Women	4,131	1.0	6,265	1.3	9,126	1.9	9,706	1.9	135.0	6.4

(a) Some institutions did not report the racial/ethnic data for ea ned degrees Data for some of these nonreporting institutions were imputed Because of rounding, details may not add to totals

(b) Degrees awarded to men as a percentage of all bachelor's degrees awarded that year

(c) Degrees awarded to women as a percentage of all bachelor's degrees awarded that year.

(d) Degrees awarded to this group as a percentage of all bachelor's degrees awarded that year

(e) Degrees awarded to men in this group as a percentage of all bachelor's degrees awarded to men that year

(f) Degrees awarded to women in this group as a percentage of all bachelor's degrees awarded to women that year

(g) Asian Amencan includes Pacific Islanders.

Sources U S Department of Education, Equal Employment Opportunity Commission, "Data on Earned Degrees Conferred from Institutions of Higher Education by Race/Ethnicity 1975–76
U S. Department of Education. Center for Education Statistics, *Digest of Education Statistics*, 1983–84. p 121
U.S. Department of Education. Center for Education Statistics. "Degrees Conferred" surveys, 1985 and 1987

Table 5
Master's Degrees by Race/Ethnicity and Sex for Selected Years (a)

	1976 Total	Percent	1981 Total	Percent	1985 Total	Percent	1987 Total	Percent	Percent Change 1976–87	Percent Change 1985–87
Total	309,263	100.0	294,183	100.0	280,421	100.0	289,349	100.0	–6.4	3.2
Men	165,474	53.5(b)	145,666	49.5	139,417	49.7	141,269	48.8	–14.6	1.3
Women	143,789	46.5(c)	148,517	50.5	141,004	50.3	148,080	51.2	3.0	5.0
Minority	30,418	9.8(d)	30,910	10.5	29,841	10.6	30,574	10.6	0.5	2.5
Men	13,595	8.2(e)	13,517	9.3	13,684	9.8	14,239	10.1	4.7	4.1
Women	16,823	11.7 (f)	17,393	11.7	16,157	11.5	16,339	11.0	–2.9	1.1
Hispanic	5,299	1.7	6,461	2.2	6,864	2.4	7,044	2.4	32.9	2.6
Men	2,868	1.7	3,085	2.1	3,059	2.2	3,330	2.4	16.1	8.9
Women	2,431	1.7	3,376	2.3	3,805	2.7	3,714	2.5	52.8	–2.4
African Americans (non Hispanic)	20 345	6.6	17,133	5.8	13,939	5.0	13,867	4.8	–31.8	–0.5
Men	7,809	4.7	6,158	4.2	5,200	3.7	5,153	3.6	–34.0	–0.9
Women	12,536	8.7	10,975	7.4	8,739	6.2	8,717	5.9	–30 5	–0.3
White (non-Hispanic)	262,771	85.0	241,216	82.0	223,628	79.7	228,870	79.1	–12.9	2.3
Men	139,507	84.3	115,562	79.3	106,059	76.1	105,574	74.7	–24.3	–0.5
Women	123,264	85.7	125,654	84.6	117,569	83.4	123,297	83.3	0.0	4.9
Asian American (g)	3,910	1.3	6,282	2.1	7,782	2.8	8,556	3.0	118.8	9.9
Men	2,409	1.5	3,773	2.6	4,842	3.5	5,237	3.7	117.4	8.2
Women	1,501	1.0	2,509	1.7	2,940	2.1	3,319	2.2	121.1	12.9
American Indian	783	0.3	1,034	0.4	1,256	0.4	1,107	0.4	41.4	–11.9
Men	428	0.3	501	0.3	583	0.4	519	0.4	21.3	–11.0
Women	355	0.2	533	0.4	673	0.5	589	0.4	65.9	–12.5
Nonresident alien	16,074	5.2	22,057	7.5	26,952	9.6	29,903	10.3	86.0	10 9
Men	12,372	7.5	16,587	11.4	19,674	14.1	21,456	15.2	73.4	9.1
Women	3,702	2.6	5.470	3.7	7,278	5.2	8,445	5.7	128.1	16.0

(a) Some institutions did not report the racial/ethnic data for earned degrees Data for some of these nonreporting institutions were imputed Because of rounding, details may not add to totals

(b) Degrees awarded to men as a percentage of all master's degrees awarded that year

(c) Degrees awarded to women as a percentage of all master's degrees awarded that year

(d) Degrees awarded to this group as a percentage of all master's degrees awarded that year

(e) Degrees awarded to men in this group as a percentage of all master's degrees awarded to men that year

(f) Degrees awarded to women in this group as a percentage of all master's degrees awarded to women that year

(g) Asian American includes Pacific Islanders.

Sources U S Department of Education, Equal Employment Opportunity Commission, "Data on Earned Degrees Conferred from Institutions of Higher Education by Race/Ethnicity 1975–76
U S. Department of Education, Center for Education Statistics, *Digest of Education Statistics*, 1983–84, pp. 122–123.

Table 6
Doctorate Awards by U.S. Citizenship, Race/Ethnicity, and Sex, 1978 to 1988

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	Percentage Change 1978–88
Total Doctorates (a)	30,875	31,239	31,020	31,357	31,106	31,280	31,332	31,291	31,896	32,367	33,456	8.4
Men	22,553	22,302	21,613	21,465	21,013	20,747	20,633	20,547	20,590	20,941	21,666	–3.9
Women	8,322	8,937	9,407	9,892	10,093	10,533	10,699	10,744	11,306	11,426	11,790	41.7
U.S. Citizens												
All U.S. Citizens (b)	25,291	25,464	25,221	25,061	24,388	24,358	24,026	23,363	23,081	22,991	23,172	–8.4
Men	17,936	17,580	16,875	16,360	15,559	15,119	14,729	14,217	13,633	13,581	13,667	–23.8
Women	7,355	7,884	8,346	8,701	8,829	9,239	9,297	9,146	9,448	9,410	9,505	29.2
	0.0											
White	21,811	21,920	21,993	21,980	21,677	21,699	21,349	20,757	20,626	20,470	20,685	–5.2
Men	15 573	15,261	14,848	14.459	13,987	13,609	13,170	12,805	12,303	12,172	12,296	–21.0
Women	6,238	6,659	7,145	7,521	7,690	8,090	8,179	7,952	8,323	8.298	8,389	34.5
African American	1,033	1,056	1,032	1,013	1,047	922	953	912	823	767	805	–22.1
Men	584	551	499	499	483	413	427	379	322	317	311	–46.7
Women	449	505	533	514	564	509	526	533	501	450	494	10.0
Hispanic	473	462	412	464	535	539	536	561	572	619	594	25.6
Men	317	308	256	275	344	288	314	300	303	333	321	1.3
Women	156	154	156	189	191	251	222	261	269	286	273	75.0
Asian American	390	428	458	465	452	492	512	516	531	542	612	56.9
Men	287	311	313	315	281	312	338	329	348	369	413	43.9
Women	103	117	145	150	171	180	174	187	183	173	199	93.2
American Indian	60	81	75	85	77	81	74	95	99	115	93	55.0
Men	50	56	46	56	44	50	54	39	58	62	51	2.0
Women	10	25	29	29	33	31	20	56	41	53	42	320.0
Non-U.S. Citizens, Total (b)	4,765	4,907	4,935	5,221	5,432	5,774	6,054	6,553	6,707	7,187	7,787	63.4
Men	4,018	4,106	4,126	4,360	4,536	4,825	5,024	5,394	5 481	5,839	6,278	56.2
Women	747	801	809	861	896	949	1,030	1,159	1,226	1,348	1,509	102.0

(a) Includes doctorates with unknown citizenship status and unknown race/ethnicity

(b) Includes doctorates with unknown race/ethnicity

Source: National Research Council, Doctorate Records File, various years

Table 7
First-Professional Degrees by Race/Ethnicity and Sex for Selected Years (a)

	1976 Total	Percent	1981 Total	Percent	1985 Total	Percent	1987 Total	Percent	Percent Change 1976–87	Percent Change 1985–87
Total	62,085	100.0	71,340	100.0	71,057	100.0	71,617	100.0	15.4	0.8
Men	52,365	84.3 (b)	52,194	73.2	47 501	66.8	46,523	65.0	–11 2	–2.1
Women	9,720	15.7 (c)	19,146	26.8	23,556	33.2	25,094	35.0	158.2	6.5
Minority	4,924	7.9 (d)	6,120	8.6	6,977	9.8	8,044	11 2	63.4	15.3
Men	3,847	7.3 (e)	4,028	7.7	4,190	8.8	4,743	10.2	23.3	13.2
Women	1,077	11.1 (f)	2,092	10.9	2,787	11.8	3,303	13.2	206.7	18.5
Hispanic	1,079	1.7	1,541	2.2	1,884	2.7	2,051	2.9	90.1	8.9
Men	915	1.7	1,131	2.2	1,239	2.6	1,303	2.8	42.4	5.2
Women	164	1.7	410	2.1	645	2.7	748	3.0	356.1	16.0
African American (non-Hispanic)	2,694	4.3	2,931	4.1	3,029	4.3	3,420	4 8	26.9	12.9
Men	2,016	3.8	1.772	3.4	1,623	3.4	1,836	3.9	–6.9	13.1
Women	678	7.0	1,159	6.1	1,406	6.0	1,585	6.3	133.8	12.7
White (non-Hispanic)	56,332	90.7	64,551	90 5	63,219	89.0	62,688	87.5	11.3	–0.8
Men	47,819	91 3	47,629	91 3	42,630	89.7	41,149	88.4	–13.9	–3.5
Women	8,513	87.6	16,922	88.4	20,589	87.4	21,539	85.8	153.0	4.6
Asian American (g)	962	1.5	1,456	2.0	1,816	2.6	2,269	3.2	135.9	24.9
Men	753	1.4	991	1.9	1,152	2.4	1,420	3.1	88.6	23.3
Women	209	2.2	465	2.4	664	2.8	849	3.4	306.2	27.9
American Indian	189	0.3	192	0.3	248	0.3	304	0.4	60.8	22.6
Men	163	0.3	134	0 3	176	0.4	184	0.4	12.9	4.5
Women	26	0.3	58	0.3	72	0.3	121	0.5	365 4	68 1
Nonresident alien	829	1.3	669	0.9	861	1.2	885	1.2	6.8	2.8
Men	699	1.3	537	1.0	681	1.4	632	1.4	–9 6	–7 2
Women	130	1.3	132	0.7	180	0.8	252	1.0	93 8	40.0

(a) Some institutions did not report the al ethnic data for earned deg.ees Data for some of these nonrepo ting i stitutions were imputed Because of rounding, details may not add to totals

(b) Degrees awarded to men as a percentage of all first-professional degrees awarded that year

(c) Degrees awarded to women as a percentage of all first-professional degrees awarded that year

(d) Degrees awarded to this group as a percentage of all first-professional degrees awarded that year

(e) Degrees awarded to men in this group as a percentage of all first-professional degrees awarded to men that year

(f) Degrees awarded to women in this group as a percentage of all first-professional degrees awarded to women that year

(g) Asian American includes Pacific Islanders

Sources U S Department of Education, Equal Employment Opportunity Commission, "Data on Earned Degrees Conferred from Institutions of Higher Education by Race/Ethnicity, 1975–76
U.S Department of Education, Center for Education Statistics *Digest of Education Statistics*,1983–34, p 126
U.S Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987

Table 8
Associate Degrees by Race/Ethnicity and Sex, 1985 and 1987 (a)

	1985 Total	1985 Percent	1987 Total	1987 Percent	Percentage Change 1985–1987
Total	429,823	100.0	436,308	100.0	1.5
Men	190,417	44.3 (b)	190,842	43.7	0.2
Women	239,406	55.7 (c)	245,466	56.3	2.5
Minority	68,073	15.8 (d)	69,803	16.0	2.5
Men	29,443	15.5 (e)	30,158	15.8	2.4
Women	38,630	16.1 (f)	39,642	16.1	2.6
Hispanic	19,407	4.5	19,344	4.4	–0.3
Men	8,561	4.5	8,764	4.6	2.4
Women	10,846	4.5	10,579	4.3	–2.5
African American (non-Hispanic)	35,799	8.3	35,467	8.1	–0.9
Men	14,192	7.5	13,956	7.3	–1.7
Women	21,607	9.0	21,511	8.8	–0.4
White (non-Hispanic)	355,343	82.7	361,815	82.9	1.8
Men	157,278	82.6	158,124	82.9	0.5
Women	198,065	82.7	203,692	83.0	2.8
Asian American (g)	9,914	2.3	11,795	2.7	19.0
Men	5,492	2.9	6,175	3.2	12.4
Women	4,422	1.8	5,619	2.3	27.1
American Indian	2,953	0.7	3,197	0.7	8.3
Men	1,198	0.6	1,263	0.7	5.4
Women	1,755	0.7	1,933	0.8	10.1
Nonresident alien	6,407	1.5	4,689	1.1	–26.8
Men	3,696	1.9	2,560	1.3	–30.7
Women	2,711	1.1	2,129	0.9	–21.5

(a) Data for years prior to 1983 did not distinguish between associate degrees and less-than-two year awards Therefore, the data for 1985 and later are not comparable to earlier years Some institutions did not report the racial/ethnic data for earned degrees Data for some of these nonreporting institutions were imputed Because of rounding, details may not add to totals

(b) Degrees awarded to men as a percentage of all associate degrees awarded that year

(c) Degrees awarded to women as a percentage of all associate degrees awarded that year

(d) Degrees awarded to this group as a percentage of all associate degrees awarded that year

(e) Degrees awarded to men in this group as a percentage of all associate degrees awarded that year

(f) Degrees awarded to women as a percentage of all associate degrees awarded that year

(g) Asian American includes Pacific Islanders

Sources U S Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987

Table 9
Bachelor's Degrees for Selected Fields by Race/Ethnicity and Sex, 1976, 1985 and 1987 (a)

	TOTAL					MINORITIES					HISPANIC					AFRICAN AMERICAN				
	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87
Education																				
Total	154,768	87,788	87,083	-43.7	-0.8	18,558	9,242	8,919	-56.8	-13.2	2,831	2,533	2,223	-21.5	-12.2	14,209	5,456	4,253	-70.1	-22.0
Men	42,157	21,146	20,759	-50.8	-1.8	5,179	2,571	2,302	-55.6	-10.5	948	597	518	-45.4	-13.2	3,700	1,569	1,348	-63.6	-14.1
Women	112,611	66,642	66,324	-41.1	-0.5	13,379	6,671	5,718	-57.3	-14.3	1,883	1,936	1,705	-9.5	-11.9	10,509	3,887	2,905	-72.4	-25.3
Business																				
Total	142,432	223,370	241,101	69.3	7.9	14,211	25,871	27,869	96.1	7.7	2,467	5,616	6,398	159.3	13.9	9,489	14,157	14,686	54.8	3.7
Men	114,410	124,074	128,921	12.7	3.9	9,522	12,299	12,576	32.1	2.3	1,998	2,928	3,251	62.7	11.0	5,877	6,279	6,051	3.0	-3.6
Women	28,022	99,296	112,180	300.3	13.0	4,689	13,572	15,293	226.1	12.7	469	2,688	3,146	570.8	17.0	3,612	7,878	8,635	139.1	9.6
Social Science																				
Total	125,820	90,795	96,173	-23.6	5.9	15,911	11,427	12,231	-23.1	7.0	3,032	2,846	2,883	-4.9	1.3	10,978	6,100	5,942	-45.9	-2.6
Men	78,070	50,789	53,870	-31.0	6.1	8,764	5,566	5,937	-32.3	6.7	1,953	1,557	1,564	-19.9	0.4	5,713	2,778	2,676	-53.2	-3.7
Women	47,750	40,006	42,303	-11.4	5.7	7,147	5,861	6,295	-11.9	7.4	1,079	1,289	1,319	22.2	2.3	5,265	3,322	3,266	-38.0	-1.7
Health Professions																				
Total	53,766	63,289	63,214	17.6	-0.1	4,655	6,969	7,008	50.5	0.6	901	1,550	1,332	47.8	-14.1	2,741	3,836	3,822	39.4	-0.4
Men	11,396	9,534	9,177	-19.5	-3.7	924	1,140	1,119	21.1	-1.8	242	309	255	5.4	-17.5	397	484	481	21.2	-0.6
Women	42,370	53,755	54,036	27.5	0.5	3,731	5,829	5,886	57.8	1.0	659	1,241	1,077	63.4	-13.2	2,344	3,352	3,341	42.5	-0.3
Biological/Life Sciences																				
Total	54,100	38,115	38,121	-29.5	0.0	4,559	5,397	5,959	30.7	10.4	873	1,241	1,259	44.2	1.5	2,326	2,045	1,932	-16.9	-5.5
Men	35,393	19,965	19,657	-44.5	-1.2	2,574	2,598	2,820	9.6	8.5	564	681	657	16.5	-3.5	1,163	806	740	-36.4	-8.2
Women	18,707	18,210	18,464	-1.3	1.4	1,985	2,799	3,139	58.1	12.1	309	560	602	94.8	7.5	1,163	1,239	1,192	2.5	-3.8
Engineering																				
Total	45,473	75,682	73,840	62.4	-2.4	3,332	8,505	10,273	208.3	20.8	841	1,775	2,007	138.6	13.1	1,370	2,039	2,356	72.0	15.5
Men	44,015	64,660	62,567	42.1	-3.2	3,184	6,790	8,114	154.8	19.5	809	1,501	1,680	107.7	11.9	1,303	1,479	1,638	25.7	10.8
Women	1,458	11,022	11,272	673.1	2.3	148	1,715	2,158	1,358.1	25.8	32	274	327	921.9	19.3	67	560	718	971.6	28.2

	WHITE					ASIAN AMERICAN (b)					AMERICAN INDIAN					NONRESIDENT ALIEN				
	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87	1976 Total	1985 Total	1987 Total	Percent Change 1976–87	Percent Change 1985–87
Education																				
Total	135,464	77,531	78,217	-42.3	0.9	776	770	1,092	40.7	41.8	742	483	452	-39.1	-6.4	746	1,015	847	13.5	-16.6
Men	36,653	18,119	18,050	-50.8	-0.4	292	240	312	6.8	30.0	239	165	124	-48.1	-24.8	325	456	407	25.2	-10.7
Women	98,811	59,412	60,166	-39.1	1.3	484	530	780	61.2	47.2	503	318	328	-34.8	3.1	421	559	440	4.5	-21.3
Business																				
Total	125,251	190,249	205,118	63.8	7.8	1,829	5,199	6,002	228.2	15.4	426	899	783	83.8	-12.9	2,970	7,250	8,114	173.2	11.9
Men	102,514	106,795	111,091	8.4	4.0	1,297	2,605	2,873	121.5	10.3	350	487	400	14.3	-17.9	2,374	4,980	5,254	121.3	5.5
Women	22,737	83,454	94,027	313.5	12.7	532	2,594	3,129	488.2	20.6	76	412	383	403.9	-7.0	596	2,270	2,860	379.9	26.0
Social Science																				
Total	108,090	77,117	81,660	-24.5	5.9	1,388	2,034	2,942	112.0	44.6	513	447	464	-9.6	3.8	1,819	2,251	2,282	25.5	1.4
Men	68,013	43,787	46,493	-31.6	6.2	787	1,002	1,448	84.0	44.5	311	229	249	-19.9	8.7	1,293	1,436	1,440	11.4	0.3
Women	40,077	33,330	35,166	-12.3	5.5	601	1,032	1,494	148.6	44.8	202	218	215	6.4	-1.4	526	815	842	60.1	3.3
Health Professions																				
Total	48,462	55,501	55,409	14.3	-0.2	847	1,310	1,578	86.3	20.5	166	273	274	65.1	0.4	649	819	797	22.8	-2.7
Men	10,196	8,114	7,790	-23.6	-4.0	247	298	337	36.4	13.1	38	49	46	21.1	-6.1	276	280	268	-2.9	-4.3
Women	38,266	47,387	47,620	24.4	0.5	600	1,012	1,240	106.7	22.5	128	224	228	78.1	1.8	373	539	530	42.1	-1.7
Biological/Life Sciences																				
Total	48,603	31,807	31,279	-35.6	-1.7	1,217	1,950	2,620	115.3	34.4	143	161	147	2.8	-8.7	933	911	883	-5.9	-3.1
Men	32,142	16,805	16,393	-49.0	-2.5	757	1,022	1,343	77.4	31.4	90	89	79	-12.2	-11.2	677	502	444	-34.4	-11.6
Women	16,461	15,002	14,886	-9.6	-0.8	460	928	1,277	177.6	37.6	53	72	68	28.3	-5.6	261	409	439	68.2	7.3
Engineering																				
Total	38,970	60,992	57,564	47.7	-5.6	971	4,482	5,695	486.5	27.1	150	209	214	42.7	2.4	3,171	6,185	6,003	89.3	-2.9
Men	37,729	52,167	48,977	29.8	-6.1	924	3,641	4,613	399.2	26.7	148	169	184	24.3	8.9	3,102	5,703	5,476	76.5	-4.0
Women	1,241	8,825	8,586	591.9	-2.7	47	841	1,082	2,202.1	28.7	2	40	30	1,400.0	-25.0	69	482	528	665.2	9.5

Some institutions did not report the race/ethnic data for earned degrees Data of some of these nonreporting institutions were imputed Because of rounding details may not add to totals
Asian American includes Pacific Islanders

Sources U S Department of Education, Equal Employment Opportunity Commission, "Data on Earned Degrees Conferred from Institutions of Higher Education by Race/Ethnicity 1975–1976"
U S Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987

Table 10
Master's Degrees for Selected Fields by Race/Ethnicity and Sex, 1976, 1985 and 1987 (a)

	TOTAL					MINORITIES					HISPANIC					AFRICAN AMERICAN				
	1976 Total	1985 Total	1987 Total	Percent Change 1985-87	Percent Change 1976-87	1976 Total	1985 Total	1987 Total	Percent Change 1976-85	Percent Change 1976-87	1976 Total	1985 Total	1987 Total	Percent Change 1986-87	Percent Change 1976-87	1976 Total	1985 Total	1987 Total	Percent Change 1985-87	Percent Change 1976-87
Education																				
Total	127,941	75 821	75,474	-0 5	-41 0	16,150	9,600	8 584	-10 6	-46 8	2,421	2,519	2,232	-11 4	-7 8	12,434	5,812	5,250	-9 7	-57 8
Men	45,668	20,844	19,635	-5 8	-57.0	5,176	2,370	2,080	-12 2	-59 8	1,002	668	601	-10 0	-40 0	3,665	1,325	1,127	-14 9	-69.2
Women	82,273	54,977	55,839	1.6	-32.1	10,974	7,230	6,503	-10.1	-40 7	1 419	1,851	1 621	-11 9	14 9	8,769	4,487	4,123	-8 1	-53 0
Business																				
Total	42,189	66,531	67,505	1 5	60 0	2,849	6,106	6,720	10 1	135 9	502	1,172	1,437	22 6	186 3	1,549	2,597	2,810	8 2	81 4
Men	37,242	45,852	45,220	-1 4	21 4	2,338	4,018	4,235	5 4	81 1	444	811	954	17 6	114 9	1 231	1,573	1,637	4 1	33 0
Women	4,947	20,679	22,285	7 8	350 5	511	2,088	2,487	19 1	386 7	58	361	483	33 8	732 8	318	1,024	1 173	14 6	268 9
Social Science																				
Total	15 767	10,223	10,395	1 7	-34 1	1,406	1,065	932	-12 5	-33 7	285	272	245	-9 9	-14 0	883	422	416	-1 4	-52.9
Men	10,753	6,298	6,293	-0 1	-41 5	847	649	549	-15 4	-35 2	200	159	154	-3 1	-23 0	489	234	226	-3 4	-53 8
Women	5 014	3 925	4,102	4 5	-18 2	559	416	385	-7 5	-31 1	85	113	91	-19 5	7 1	394	188	190	1 1	-51 8
Health Professions																				
Total	12,422	17,062	18 420	8 0	48.3	1,049	1,652	1,784	8 0	70 1	175	296	378	27 7	116 0	622	819	856	4 5	37 6
Men	4,186	4,052	3,885	-4 1	-7 2	346	456	375	-17 8	8 4	74	89	72	-19 1	-2 7	169	179	139	-22 3	-17 8
Women	8 236	13,010	14,535	11 7	76 5	703	1,196	1,409	17 8	100 4	101	207	306	47 8	203 0	453	640	717	12 0	58 3
Public Affairs																				
Total	16,924	15,061	17,030	13 1	0.6	2,306	2,316	2,607	12.6	13 1	437	568	611	7 6	39 8	1,615	1,406	1 553	10 5	-3 8
Men	9 324	5 332	6,189	16 1	-33.6	1,044	802	978	21.9	-6 3	241	188	263	39 9	9 1	660	483	517	7 0	-21 7
Women	7,600	9,729	10,841	11 4	42 6	1,262	1,514	1,634	7 9	29 5	196	380	347	-8 7	77 0	955	923	1,036	12 2	8 5
Engineering																				
Total	15,907	20,145	22,046	9 4	38.6	1 001	2,265	2,695	19 0	169.2	228	337	521	54 6	128 5	233	330	419	27 0	79.8
Men	15,332	17,975	19,279	7 3	25 7	939	1,987	2,324	17 0	147 5	220	296	450	52 0	104 5	210	274	328	19 7	56 2
Women	575	2,170	2 767	27 5	381.2	62	278	370	33 1	496 8	8	41	71	73 2	787 5	23	56	91	62 5	295.7

	WHITE					ASIAN AMERICAN					AMERICAN INDIAN					NONRESIDENT ALIEN				
	1976 Total	1985 Total	1987 Total	Percent Change 1976-87	Percent Change 1985-87	1976 Total	1985 Total	1987 Total	Percent Change 1976-87	Percent Change 1985-87	1976 Total	1985 Total	1987 Total	Percent Change 1976-87	Percent Change 1985-87	1976 Total	1985 Total	1987 Total	Percent Change 1976-87	Percent Change 1985-87
Education																				
Total	109,465	63,302	64,492	1 9	-41 1	905	801	725	-9 5	-19 9	390	468	375	-19 9	-3 8	2,326	2,919	2 398	-17 8	3 1
Men	39,251	17,047	16,431	-3 6	-58 1	340	238	232	-2 5	-31 8	169	139	120	-13 7	-29 0	1,241	1,427	1,124	-21 2	-9.4
Women	70,214	46,255	48,061	3 9	-31 6	565	563	492	-12 6	-12 9	221	329	256	-22 2	15 8	1,085	1,492	1,275	-14 5	17.5
Business																				
Total	36,200	54 623	53,582	-1 9	48 0	727	2,066	2,304	11 5	216 9	71	271	170	-37 3	139 4	3,140	5,802	7,203	24 1	129 4
Men	32,136	37,240	35,505	-4 7	10 5	599	1,445	1,531	6 0	155 6	64	189	112	-40 7	75 0	2,768	4,594	5,480	19 3	98 0
Women	4,064	17,383	18,077	4 0	344 8	128	621	773	24 5	503 9	7	82	58	-29 3	728 6	372	1,208	1,721	42 5	362 6
Social Science																				
Total	13 068	7,333	7,441	1 5	-43 1	200	328	249	-24 1	24 5	38	43	23	-46 5	-39 5	1,293	1,825	2,022	10 8	56 4
Men	8 906	4,326	4,316	-0 2	-51 5	134	231	152	-34 2	13 4	24	25	17	-32 0	-29 2	1,000	1,323	1,428	7 9	42 8
Women	4,162	3,007	3 125	3 9	-24 9	66	97	98	1 0	48 5	14	18	6	-66 7	-57 1	293	502	592	17 9	102 0
Health Professions																				
Total	10,833	14,565	15,724	8 0	45 1	215	476	469	2 7	127 4	37	61	62	1 6	67 6	540	845	912	7 9	68 9
Men	3 536	3 170	3 048	-3 8	-13 8	86	174	152	-12 6	76 7	17	14	12	-14 3	-29 4	304	426	462	8 5	52 0
Women	7,297	11,395	12,676	11 2	73 7	129	302	337	11 6	161 2	20	47	50	6 4	150 0	236	419	450	7 4	90 7
Public Affairs																				
Total	14 145	12,119	13,645	12 6	-3 5	194	257	314	22 2	61 9	60	85	134	57 6	123 3	473	626	778	24 3	64 5
Men	7 959	4,105	4,696	14 4	-41 0	109	99	146	47 5	33 9	34	32	52	62 5	52 9	321	425	515	21 2	60 4
Women	6,186	8 014	8 949	11 7	44 7	85	158	167	5 7	96 5	26	53	83	56 6	219 2	152	201	258	28 4	69 7
Engineering																				
Total	11 414	12,186	13,342	9 5	16 9	500	1 551	1 715	10 6	243 0	40	47	39	-17 0	-2 5	3,492	5,694	6,009	5 5	72 1
Men	11,001	10,646	11,399	7 1	3 6	469	1,374	1,513	10 1	222 6	40	43	33	-23 3	-17 5	3,392	5,342	5,556	4 0	63 8
Women	413	1,540	1,944	26 2	370 7	31	177	202	14 1	551 6	0	4	6	50 0	N/A	100	352	453	28 7	353 0

Table 11
Doctorate Degrees by Field, U.S. Citizenship and Race/Ethnicity, 1980 and 1988

	TOTAL			PHYSICAL SCIENCE			ENGINEERING			LIFE SCIENCE		
	1980	1988	Percentage Change	1980	1988	Percentage Change	1980	1988	Percentage Change	1980	1988	Percentage Change
Total Doctorates (a)	31,020	33,456	7.9	4,111	5,309	29 1	2,479	4,190	69.0	5,461	6,143	12.5
American Indian	75	93	24.0	5	11	120.0	3	4	33.3	7	18	157.1
Asian	2,621	4,771	82.0	605	1,161	91 9	740	1,462	97.6	482	764	58.5
Black	1,445	1,246	-13 8	50	69	38 0	57	67	17.5	161	179	11.2
Hispanic	821	1,045	27.3	91	153	68 1	77	125	62.3	173	227	31.2
White	23,805	23,053	-3.2	3,013	3,388	12 4	1,428	2,066	44 7	4,258	4,425	3.9
U.S. Citizens (b)	25,221	23,172	-8.1	3,072	3,226	5 0	1,255	1,778	41 7	4,415	4,383	-0.7
American Indian	75	93	24.0	5	11	120.0	3	4	33 3	7	18	157.1
Asian	458	612	33.6	75	111	48.0	73	141	93 2	102	127	24.5
African American	1,032	805	-22.0	25	32	28.0	11	19	72.7	65	71	9.2
Hispanic	412	594	44.2	27	69	155.6	18	43	138 9	36	84	133.3
White	21,993	20,685	-5.9	2,715	2,913	7.3	1,068	1,527	43 0	3,958	4,019	1.5
Permanent Visas (b)	1,291	1,611	24.8	252	252	0.0	299	366	22.4	229	304	32.8
American Indian	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0 0
Asian	644	621	-3.6	162	118	-27.2	205	191	-6.8	128	105	-18.0
Black	74	146	97.3	4	9	125.0	7	12	71.4	10	32	220.0
Hispanic	73	98	34.2	10	6	-40 0	9	20	122.2	8	25	212.5
White	486	668	37.4	70	100	42.9	75	124	65.3	77	127	64.9
Temporary Visas (b)	3,644	6,176	69 5	688	1,477	114.7	851	1,723	102.5	714	1,062	48.7
American Indian	0	[illegible]	0 0	0	0	0 0	0	0	0.0	0	0	0.0
Asian	1,472	3,[illegible]	138.5	360	922	156.1	448	1,125	151.1	246	525	113.4
Black	331	[illegible]	-12.7	20	27	35 0	39	36	-7.7	85	75	-11.8
Hispanic	328	346	5.5	51	75	47.1	49	61	24 5	129	117	-9.3
White	1,331	1,676	25.9	227	374	64 8	284	412	45.1	219	275	25.6

	SOCIAL SCIENCE			HUMANITIES			EDUCATION			PROFESSIONAL OTHER		
	1980	1988	Percentage Change	1980	1988	Percentage Change	1980	1988	Percentage Change	1980	1988	Percentage Change
Total Doctorates (a)	5,856	5,769	-1.5	3,871	3,553	-0 1	7,586	6,349	-16 3	1,656	2,143	29.4
American Indian	13	12	-7.7	3	7	133 3	43	35	-18.6	1	6	500.0
Asian	320	484	51.3	132	197	49.2	242	360	48 8	100	343	243.0
Black	249	250	0.4	127	110	-13.4	701	469	-33.1	100	102	2.0
Hispanic	150	188	25 3	118	138	16.9	183	180	-1.6	29	34	17.2
White	4,791	4,194	-10.6	3,191	2,791	-12 5	5,919	4,790	-19 1	1,305	1,399	7.2
U.S. Citizens (b)	4,992	4,315	-13 6	3,394	2,787	-17.9	6,749	5,276	-21 8	1,344	1,407	4.7
American Indian	13	12	-7.7	3	7	133.3	43	35	-18.6	1	6	500.0
Asian	79	85	7 6	40	37	-7.5	65	82	26.2	24	29	20 8
African American	180	158	-12 2	97	77	-20.6	591	370	-37.4	63	78	23 8
Hispanic	93	133	43.0	79	94	19 0	144	152	5.6	15	19	26.7
White	4,402	3,864	-12 2	3,020	2,528	-16.3	5,652	4,575	-19 1	1,178	1,259	6.9
Permanent Visas (b)	196	221	12 8	136	168	23.5	112	170	51 8	67	130	94.0
American Indian	0	0	0 0	0	0	0.0	0	0	0.0	0	0	0.0
Asian	66	58	-12 1	30	32	6.7	28	48	71 4	25	69	176.0
Black	22	37	68.2	7	11	57.1	16	38	137.5	8	17	112.5
Hispanic	12	15	25 0	24	18	-25.0	8	7	-12 5	2	7	250.0
White	88	97	10.2	70	105	50.0	58	71	22.4	30	44	46.7
Temporary Visas (b)	484	707	46.1	206	346	68.0	507	479	-5.5	192	382	99.0
American Indian	0	0	0.0	0	0	0.0	0	0	0 0	0	0	0.0
Asian	167	337	101.8	59	128	116.9	145	228	57.2	47	245	421.3
Black	44	54	22.7	23	21	-8 7	91	59	-35 2	29	17	-41 4
Hispanic	43	39	-9.3	14	26	85.7	30	21	-30.0	12	7	-41.7
White	198	230	16.2	100	153	53 0	206	140	-32.0	97	92	-5.2

"Total Doctorates" number includes unknown citizenship and unknown race
Totals for other categories include unknown race.
Source National Research Council, Doctorate Records File, various years

Table 12
Degrees Conferred by Historically Black Colleges and Universities, 1982, 1985 and 1987 (a)

Year	Sub-Baccalaureate	Bachelor's	Master's	Doctorate	First-Professional	Total
1982	2,349	22,047	4,447	87	887	29,817
1985	3,147	21,467	4,213	174	942	29,943
1987	1,942	20,291	4,064	194	853	27,344
Percent Change 1985 to 1987	-38.3	-5.5	-3.5	11.5	-9.4	-8.7

(a) 1987 data show degrees granted from a total of 97 HBCUs compared to 100 in 1985 Three institutions were not included in 1987 because they had either closed, merged with another institution, or were no longer accredited by an agency recognized by the U S Department of Education.

Sources Susan T Hill, The Traditionally Black Institutions of Higher Education 1860–1962, Washington, D C Center for Education Statistics, 1984
U S Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987 Tabulations done by the American Council on Education's, Division of Policy Analysis and Research

Table 13
Degrees Conferred by Historically Black Colleges and Universities in Selected Fields, 1982, 1985, and 1987 (a)

TOTAL	Bachelor's 1982	1985	1987	Percent Change 1985–87	Master's 1982	1985	1987	Percent Change 1985–87	Doctorate 1982	1985	1987	Percent Change 1985–87
Business and Management	5,692	6,518	5,737	-12.0	577	594	586	-1.3	0	0	0	n.a.
Education	3,852	2,832	2,421	-14.5	2,456	2,178	1,935	-11.2	22	73	91	24.7
Social Sciences	2,433	1,803	1,666	-7.6	133	103	107	3.9	19	23	26	13.0
Engineering and Engineering Technologies	1,646	1,558	1,553	-0 3	73	110	110	0.0	1	2	1	0.0
Public Affairs and Services	1,470	1,312	1,269	-3.2	419	369	406	10.0	12	4	9	125.0
Health Sciences	847	795	885	11.3	60	53	95	79.2	0	0	0	n.a

NOTES (a) 1987 data show degrees granted from a total of 97 HBCUs compared to 100 in 1985 Three institutions were not included in 1987 because they had either closed, merged with another institution, or were no longer acccredited by an agency recognized by the U S Department of Education

SOURCES Susan T Hill, *The Traditionally Black Institutions of Higher Education 1986–1962*, Washington, D C Center for Education Statistics, 1984
US Department of Education, Center for Education Statistics, "Degrees Conferred" surveys, 1985 and 1987 Tabulations done by the American Council on Education's, Division of Policy Analysis and Research

Appendix A
Tables for Special Focus on High School Completion and College Participation Rates of Low- and Middle-Income Youth

Table A-1
Income Quartiles for Families with Dependent Family Members 18-to-24 Years Old, Selected Years 1973 to 1988

	1st Quartile	2nd Quartile	3rd Quartile	4th Quartile
1973	Under $7 730	$7,731 to 12,013	$13,014 to 17,601	$17,602 and above
1976	Under 9,147	9,148 to 15,155	15,156 to 22,578	22,579 and above
1979	Under 11,817	11,818 to 20,195	20,196 to 28,688	28,689 and above
1982	Under 13,434	13,435 to 24,953	24,954 to 37,795	37,796 and above
1985	Under 16,049	16,050 to 29,489	29,490 to 44,324	44,325 and above
1987	Under 16,450	16,451 to 30,868	30,869 to 48,709	48,710 and above
1988	Under 18,581	18,582 to 33,510	33,511 to 52,119	52,120 and above

Table A-2
Distribution of Racial/Ethnic Groups by Income Quartiles, Selected Years 1973 to 1988 (a)

	1973	1976	1979	1982	1985	1987	1988
Whites	100	100	100	100	100	100	100
Q1	22	20	20	19	20	20	20
Q2	23	24	24	24	24	24	25
Q3	27	27	28	27	27	27	27
Q4	28	29	29	29	29	29	28
Blacks	100	100	100	100	100	100	100
Q1	58	59	60	57	54	49	51
Q2	20	24	23	25	27	29	25
Q3	15	12	13	14	14	14	16
Q4	7	5	4	4	5	8	8
Hispanics	100	100	100	100	100	100	100
Q1	54	48	45	47	44	45	45
Q2	26	25	31	28	30	33	33
Q3	15	17	14	16	15	15	17
Q4	6	10	10	9	11	7	5

(a) Figures shown represent the distribution of 18-to 24 year olds who are dependent primary family members Percentages may not add to 100 percent because of rounding

Table A-3
Distribution of High School Graduates by Racial/Ethnic Group and Income Quartiles, Selected Years 1973 to 1988 (a)

	1973	1976	1979	1982	1985	1987	1988
Total Population	100	100	100	100	100	100	100
Q1	22	20	21	20	21	20	0
Q2	23	24	24	24	24	24	25
Q3	27	27	27	27	27	27	27
Q4	28	29	29	29	28	29	29
Whites	100	100	100	100	100	100	100
Q1	18	16	16	15	16	16	15
Q2	23	24	23	23	24	23	24
Q3	28	29	29	29	29	29	29
Q4	31	32	32	33	32	32	31
Blacks	100	100	100	100	100	100	100
Q1	51	51	51	49	48	44	43
Q2	22	27	25	28	29	30	28
Q3	18	15	17	17	17	16	19
Q4	8	7	6	5	6	10	10
Hispanics	100	100	100	100	100	100	100
Q1	45	38	38	37	38	39	35
Q2	29	27	31	31	31	33	37
Q3	19	21	17	20	18	19	21
Q4	7	14	14	12	14	9	7

(a) Figures shown represent the distribution of 18 to 24 year olds who are dependent family members. Percentages may not add to 100 percent because of rounding.

Table A-4
Distribution of Racial/Ethnic Groups Enrolled in College by Income Quartiles, Selected Years 1973 to 1988 (a)

	1973	1976	1979	1982	1985	1987	1988
Total Population	100	100	100	100	100	100	100
Q1	17	16	16	14	14	15	15
Q2	19	21	21	21	21	21	22
Q3	27	28	27	27	30	28	28
Q4	36	35	35	38	35	36	35
Whites	100	100	100	100	100	100	100
Q1	14	12	12	10	11	11	11
Q2	19	19	20	20	20	20	22
Q3	28	30	28	28	31	30	29
Q4	39	39	39	42	39	39	37
Blacks	100	100	100	100	100	100	100
Q1	49	43	45	40	41	37	37
Q2	21	29	28	31	28	28	22
Q3	18	18	19	20	22	20	25
Q4	12	11	7	10	10	15	15
Hispanics	100	100	100	100	100	100	100
Q1	43	38	35	32	35	38	29
Q2	27	27	31	28	30	33	35
Q3	22	23	18	23	21	16	26
Q4	8	13	16	16	14	13	9

(a) Figures shown represent the distribution of 18 to 24 year olds who are dependent primary family members. Percentages may not add to 100 percent because of rounding.

Table A-5
High School Completion Rates of Dependent 18-to-24-Year-Olds, Selected Years, 1973 to 1988 (a)
(percentages)

Income, Race/ Ethnicity and Sex	1973	1976	1979	1982	1985	1987	1988
ALL RACES							
Total	82 1	82.3	81.1	81.5	83.8	82.7	82.4
Low	65.9	64.7	63.8	62.8	68.0	67.1	64.2
Middle	85.7	85.7	84.2	84.9	86.5	84.7	85.7
Upper	93.1	93.9	93.0	93.9	94.6	94.4	94.1
Men	79.7	78.6	77.0	77.8	80.3	79.6	78.9
Low	62.4	58.4	56.4	57.2	62.0	62.5	59.0
Middle	82.8	81.8	80.4	81.0	83.0	81.2	82.2
Upper	91.9	92.7	91.5	92.7	93.2	93.2	92.3
Women	85.2	87.0	85.9	86.0	88.2	86.3	86.5
Low	70.0	72.4	72.8	69.7	75.0	72.2	70.1
Middle	89.6	90.7	98.6	89.8	91.0	88.9	90.1
Upper	94.8	95.4	94.6	95.4	96.4	95.8	96.3
WHITE							
Total	84.4	85.1	84.1	84.3	85.7	84.5	84.2
Low	70.0	68.4	68.0	65.6	69.2	67.5	64.6
Middle	87.0	86.6	85.1	85.7	87.0	85.5	86.4
Upper	93.6	94.0	93.2	93.9	94.5	94.4	94.2
Men	82.8	81 8	80.2	81.1	82.4	81.3	81.0
Low	67.0	62.7	61.1	60.9	64.3	62.5	61.2
Middle	84.3	83.1	81.1	82.3	83.6	81.9	83.0
Upper	92.5	92.8	91.7	92.4	93.0	93.5	91.9
Women	88.3	89.6	89.1	88.3	89.9	88 4	88.2
Low	73.9	76 2	77.6	71.8	75.9	73.8	68.9
Middle	90.8	91.3	89.9	90 1	91.4	89.9	90.8
Upper	95.2	95.6	95.1	95.7	96.4	95.5	96.9
AFRICAN AMERICAN							
Total	65.3	67.1	64.9	68 3	74.8	74.0	72.9
Low	57.2	58.2	55.5	58.4	65.8	66 1	61.3
Middle	75.8	78.6	78.5	80.4	83.7	79.5	83.5
Upper	80.5	88 1	83.1	95.3	97.9	92.8	93.7
Men	60.9	59.4	57.6	61.0	69.3	69 2	67.4
Low	51 6	49.1	45.8	50.5	56.7	59.8	53.1
Middle	70.9	71.1	74.7	72.4	79.9	74.6	79.0
Upper	79.9	84.9	75.4	96.0	99.1	89.0	92.8
Women	70.0	75.2	72.4	76.6	80.6	78.7	78.5
Low	62.8	66.8	65.3	66.9	74.3	71.6	69.1
Middle	81.6	87.6	82.7	89 8	88.5	84.6	88.3
Upper	80 5	91.0	90.4	94.5	96.1	98.6	95.0
HISPANIC (b)							
Total	63.8	66.9	64.1	64.8	67.8	65.9	64.6
Low	53.0	54.1	54.0	50.9	58.0	57.0	50.6
Middle	75.5	76.0	68.9	75.7	73.4	70.8	75.5
Upper	82.8	89.4	89 4	84.7	85.4	90 9	81.4
Men	60.2	64.3	57.6	58.5	61 5	62.5	59.6
Low	46.9	49.8	43.1	43.1	53.6	53.2	43.2
Middle	74.3	72.6	64.3	70.7	65.6	66.1	72.3
Upper	73.4	88.8	88.4	84.0	90.1	94.3	66.5
Women	68.6	70.2	72.2	71.9	75 7	70.4	71.5
Low	60.2	58.9	66.4	60.2	65 2	61.5	59.7
Middle	78.5	79.9	75.0	81.1	81 9	77.3	80.9
Upper	84.9	91.2	90.8	85.3	82.5	85.9	91.9

(a) Figures show the percentage of high school graduates for all 18 to 24 year old dependent primary family members as of October of that year. High school completion rates are based on data that include some 18 and 19 year olds who are enrolled in high school as of October and will later complete. It is likely that this applies to more low-income youth than middle or upper income students, since low income students are more likely to complete high school more slowly than middle or upper income youth.

(b) Hispanics may be of any race.

Source: U.S. Department of Commerce, Bureau of Census, Current Population surveys, various years. Special analysis by ACE's Division of Policy Analysis and Research.

Table A-6
Enrolled-in-College Participation Rates of Dependent High School Graduates by Income, Race/Ethnicity and Sex, Selected Years, 1973 to 1988 (a)

(percentages)

Income, Race/ Ethnicity and Sex	1973	1976	1979	1982	1985	1987	1988
ALL RACES							
Total	46.3	49.1	45.5	45.5	45.7	49.5	50 7
Low	35.7	37.8	35.9	32.0	31 6	36.0	36.8
Middle	43.6	46.9	43.3	42.7	45.1	47.9	49.3
Upper	59.4	61.0	56.2	59.8	57.0	62.1	62.8
Men	46.9	46.1	43.8	43.2	43.3	48 1	47.7
Low	37.2	35.5	35.1	28.6	30.1	34.2	30 3
Middle	43.2	43.5	41 4	40.1	41.5	46.6	46.9
Upper	59.8	57.3	53.2	57.4	55.2	59.6	60.6
Women	45.7	52 6	47.4	48.1	48.4	51.1	54.0
Low	34.1	40.2	36.7	35 4	33.0	37.7	43.2
Middle	44.1	50.9	45.4	45.5	49.3	49.3	52.0
Upper	58.8	65.8	60.2	62.7	59.3	65.0	65.3
WHITE							
Total	47.9	49.3	46 2	46.3	47.3	50.9	52.9
Low	36.8	37.0	35 8	32.5	31.7	36.4	38.8
Middle	44.5	46.0	43.1	42.3	46.0	48.7	51.0
Upper	59 9	60.9	56.4	59.3	57.2	62.0	63.2
Men	48.1	46.1	44.5	43.8	44.7	50.9	49.8
Low	37.9	34.9	33.8	29.9	29.1	36.4	32.1
Middle	44.2	42 4	41.6	39.5	43.0	48.4	48.8
Upper	60.2	57.3	53.6	56.7	55.0	62.0	60.6
Women	47.5	53.3	48.2	49.3	50.4	52.6	56.4
Low	35.4	39.4	38.1	35.3	34 8	38.0	46.4
Middle	44.9	50.5	44 6	45 5	49.4	49.9	53.5
Upper	59.4	65.5	60.1	62.4	60.0	64.8	66.1
AFRICAN AMERICAN							
Total	33.2	47.5	39.0	36 0	32 8	37.1	35.5
Low	31.7	39.8	34.2	29.2	27.9	31.1	30.3
Middle	32.0	52.7	43.6	40.2	35.5	39 3	36.2
Upper	*	*	*	*	*	*	*
Men	34.9	46.5	36.4	32.6	30.8	35.1	29.5
Low	*	37.2	36.1	23 0	29.0	26.8	23.0
Middle	*	53 2	36.4	39 4	29.0	37.4	28.1
Upper	*	*	*	*	*	*	*
Women	31 6	48.3	41.1	39.1	34 6	38.8	40.8
Low	*	41 7	32.9	34.2	27.1	34.1	35.6
Middle	*	52 2	51.0	41.0	42.6	41.0	44.1
Upper	*	*	*	*	*	*	*
HISPANIC (b)							
Total	51 5	51 6	42 2	39.2	39 4	40 7	43.5
Low	*	50.4	38 7	34 3	36 0	39.7	35.3
Middle	*	53.4	42.6	39.4	41.8	38 5	46.4
Upper	*	*	*	*	*	*	*
Men	*	48.7	48.6	33.9	35.0	39 8	42.3
Low	*	*	*	*	*	*	*
Middle	*	*	*	*	*	*	*
Upper	*	*	*	*	*	*	*
Women	*	54.9	36 0	44.2	43.8	41.7	44.9
Low	*	*	*	*	*	*	*
Middle	*	*	*	*	*	*	*
Upper	*	*	*	*	*	*	*

(a) Figures show the percentage of 18 to 24 year old dependent high school graduates who are dependent primary family members and enrolled in college as of October of that year

(b) Hispanics may be of any race

*The number of cases in the sample is too small to produce reliable estimates for this population

Source U S Department of Commerce, Bureau of Census, Current Population surveys Special analysis by ACE s Division of Policy Analysis and Research

Appendix B—Technical Notes

Data for the special focus section was taken from the October school enrollment survey conducted as a supplement to that month's Current Population Survey (CPS). The CPS is a monthly labor force survey conducted in approximately 53,000 households by the U.S. Bureau of the Census. The October supplement provides the only yearly national accounting of high school completion and college participation by race/ethnicity and family income. Since family income data on the October supplement is requested in income ranges rather than in actual dollars, it does not provide the more accurate measure of family income when compared to the March income supplement. Even with this shortcoming, the October survey is considered to be the best nationally representative sample available for determining college-going rates by income.

The study used recommended CPS weighting procedures. Based on these procedures, the adult records (persons 14 years of age and older) are controlled to and agree with, in aggregate, published, composite October CPS labor force estimates for each year (e.g. employed, unemployed, not in the labor force, by age, race, and gender).

The study analyzed data from three-year intervals between 1973 and 1988. Data for 1987 also were included because participation rates for this year had not been listed in prior reports.

The analysis is based on persons between the ages of 18 and 24 who are dependent primary family members. For the purpose of this study, a dependent primary family member is a person who is not married and is the child or sibling of the head of household. More than 95 percent of the people in this group are children of the head of household. Dependent high school graduates are more likely to attend college than their independent counterparts. Consequently, the college participation rates for these youngsters will be slightly higher than those of all 18-to-24-year-old high school graduates. This analysis excludes persons in the Armed Forces.

Family income quartiles for the total population of 18-to-24-year-old dependent family members were established each year based on current dollars for that year using Pareto-linear interpolation. The middle two-quartiles were combined to represent middle-income familes. The dollar value of the quartiles for each year are presented in Appendix Table A-1. These income ranges were held constant when determining income distribution of high school graduates and of students enrolled in college by race/ethnicity and gender.

Appendix Table A-2 shows the quartile distribution for the total population (18-to-24-year-old dependent family members), and the respective distributions of whites, African Americans, and Hispanics within quartiles. As shown in this table, African Americans and Hispanics are concentrated in the lower two quartiles, with whites more evenly distributed across all four quartiles. Appendix Table A-3 provides the distribution of high school graduates within each racial/ethnic group by income quartile, and Table A-4 provides the same for those enrolled in college. Each relative distribution is based on the income quartiles of all families within each group with dependent members 18 to 24 years of age.

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